

# ABERDEEN CITY COUNCIL Roads Winter Service Plan 2019 – 2020



Specification & Operational Plan



#### **OPERATIONS**

#### **ROADS OPERATIONS**

WINTER SERVICE PLAN

2019-2020

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#### ABERDEEN CITY COUNCIL

#### **OPERATIONS AND PROTECTIVE SERVICES**

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#### WINTER SERVICE PLAN

#### 2019 - 2020

#### PART 1 SPECIFICATION

#### WINTER SERVICE PLAN

#### PART 1 SPECIFICATION DOCUMENT

#### 1. <u>Policy</u>

- 1.1 The City Council's policy is stated in the report submitted to the Roads Sub-Committee of the Policy and Resources Committee on 19<sup>th</sup> September 1996 and Policy & Strategy Committee of 5<sup>th</sup> June 2008.
- 1.2 The Council's policy objectives in relation to winter service is defined as the reduction, as far as practicable, of the effects of adverse weather conditions on the movement of people and vehicles to facilitate safe travel on the more important roads in the City.

#### 2. <u>Priorities and Standards</u>

#### 2.1 <u>General</u>

The Committee agreed that the priorities for treatment and standards of treatment be determined in accordance with the relative importance of any particular road in the Road network, and that the relevant Corporate Director be requested to endeavour to curtail the level of expenditure within the sum provided in the annual budget, bearing in mind the conditions which pertain and the policies set down in the report.

- 2.1.1 Priority 1 routes will be principal roads or other classified roads serving as the main routes of major traffic distributors. Priority 1 routes should also carry heavy traffic flows or serve as major public service bus routes or give access to public service or emergency facilities providing an essential public service. In special circumstances a road which does not meet the above definition may be considered a priority 1 route if it is regularly used and presents special hazards because it is habitually liable to drifting snow or freezing because of altitude or exposure etc. A road need not be considered a priority route at all times.
- 2.1.2 Priority 1 routes shall be separated into two levels those of strategic importance (Strategic Roads and Main Distributor Roads and access roads to emergency services facilities in addition to the detrunked sections of the A92 and A96) and Priority 1 Silver, those of less than strategic importance (Historic Priority 1 routes less Priority 1 Gold routes and Link Roads and Local Access Roads that do not have any special circumstance such as steep slopes, etc. These routes are identified in Appendix C.
- 2.1.3 The standard to be aimed at on Priority 1 routes is that:

For the Priority 1 Gold routes for 24 hours 7 days a week during the winter. For the Priority 1 Silver routes between the hours of 04.45 and 21.00 7 days a week.

These routes should never become impassable to traffic, during the times indicated, unless there are abnormal conditions. Snow and ice clearance should be started as soon as practical when the need for it becomes apparent. Equipment and resources should be provided and should be capable of being deployed sufficiently quickly to be able to salt for ice or clear a moderate snowfall of up to 50 millimetres depth (2 inches) within two and a half hours of the physical start of operations.

- 2.1.4 There should be, for these routes an availability of crews and equipment with the Response crews and standby arrangements being such that the response time for an instruction from a responsible officer of the authority to commence winter service operations to the start of snow or ice clearing on site should not be greater than one hour, during the times indicated in clause 2.1.3.
- 2.1.5 Consideration will be given to the pre-salting of priority 1 routes on receipt of an adverse weather forecast to prevent the formation of ice, or to make the clearing of snow or ice from the surface of the road less difficult.
- 2.1.6 A list of priority 1 Gold and Silver routes should be drawn up. The routes will be collated into convenient lengths to be dealt with by one or more salt stores and the need to keep mileage, which is run empty for reloading to an absolute minimum.
- 2.1.7 The priority 1 Gold and Silver routes should be reviewed annually in the late summer/autumn months to take account of changes in the road layout e.g. change from single to dual carriageway or in the light of new development and particularly the opening of new community facilities e.g. hospitals or similar, or in the light of changes in the road network and amendments to the routing of Public Transport.
- 2.1.8 Priority 2 routes will be principal and other classified roads not included in the priority 1 routes but which serve as main roads or as traffic distributors and which carry medium traffic flows or give access to community or public facilities of a non-essential nature. These routes will contain the (Category 3b Secondary Distributor routes 4a Link Roads)
- 2.1.9 In order to provide an efficient and effective use of labour and plant several of the Priority 2 Routes may be included in the Priority 1 Gold and Silver routes, the remaining Priority 2 routes will only be treated once the combined Priority 1 & 2 routes have been opened to traffic. The remaining Priority 2 roads will be dealt with on an "Area Response" basis with the allocation of resources to the defined areas being subject to the prevailing weather conditions. Treatment of an Area is not subject to a time for completion due to their size and complexity. Additional resources from external Contractors may be employed to assist in the operation.
- 2.1.10 Priority 3 locations (Category 4b Link Roads) such as access roads, service roads, cul de sacs and minor roads where it could be expected that residents and employees etc could make their way with some difficulty in all but abnormal conditions to the nearest higher priority route.
- 2.1.11 The standard for Priority 3 locations would be that they would not normally be treated unless conditions were severe enough to prevent the passage of emergency vehicles, where it was considered in the light of prevailing weather forecasts that the conditions might be expected to persist for some time or that there was an exceptional depth of snow packed snow or ice. In the case of a medical emergency or an event such as a funeral the location in question would be treated. Priority 3 locations due to width of access, or they are dead ends will not always be accessible with normal winter

maintenance plant and would not be treated until all routes of a higher priority had been opened to traffic.

- 2.1.12 Non-Aberdeen City Council maintained roads and roads or lanes providing a secondary means of access for service vehicles together with roads on which there are no direct accesses to any habitations would not be treated except in the case of a medical emergency.
- 2.1.13 In extreme weather conditions only, Priority 1 routes will be treated. Should salt stock levels diminish, salt treatment of Areas will be stopped, then Priority 2 routes, until only priority 1 routes are being treated.

#### 2.2 Priorities and Standards – Footways & Cycle Ways

- 2.2.1 The priority with regard to the treatment of footways is that, precedence will be given to those footways in the City for which the Council is responsible and which carry the greatest number of pedestrians. This means the central areas of the City where the shopping and commercial facilities etc are concentrated. Precedence will also be given to footways and gradients, which are so steep, that they would be dangerous when covered with ice or hard packed snow. This may be altered by the duty superintendent or the duty officer depending on the circumstances that are being encountered.
- 2.2.2 The standard to be aimed at for footways on the Priority 1 list is that, these footways should be kept in a safe condition for pedestrians. In "normal" conditions snow or ice clearance should be started as soon as practicable when the need for such treatment becomes apparent. Equipment and resources should be provided and should be capable of being deployed sufficiently quickly to be able to begin treatment of a moderate snowfall between the hours of 07.45 and 15.45 Monday to Friday. At weekends the duty superintendent or the duty officer will determine if additional resources can be sourced.
- 2.2.3 All other footways in the city will be considered to have a lower priority although again precedence will be given to the more heavily trafficked routes, footways in the vicinity of major public services, medical or community facilities providing an essential public service and where numbers of infirm, elderly, accompanied infants and young children are likely to congregate. These footways will be treated only when the Priority 1 routes have been treated and made safe for pedestrian movement and will be dealt with on an Area Response basis with the allocation of resources to the defined areas being subject to the prevailing weather conditions. Treatment of an Area is not subject to a time for completion due to their size and complexity.

During forecasts of snow or ice or for periods of snow or ice council employees will be deployed to treat Priority 1 footways and then continue into the Areas, additional resources from external Contractors may be employed to assist in the operation.

- 2.2.4 Other equipment and resources should be deployed to deal with particular situations as conditions dictate, particularly where treatment has not been carried out and there is a public need for such treatment at individual locations, e.g. bus stops, pedestrian crossings, traffic islands and the like.
- 2.2.5 Privately maintained footways will not normally be treated.

2.2.6 Cycle ways in the city will be considered to have the same priority as lower priority footways. These cycle ways will be treated only when the Priority 1 routes have been treated and will be dealt with on an Area Response basis in conjunction with the footways in that area. The allocation of resources to the defined areas will be subject to the prevailing weather conditions. Treatment of an Area is not subject to a time for completion due to their size and complexity. In keeping with Priority 3 carriageways, it would be expected that cyclists could make their way with some difficulty in all but abnormal conditions to the nearest higher priority route. A list of the cycle ways to be treated was approved at the EP & I Committee on 12 November 2013 and is included in Appendix C.

#### 2.3 Self Help

- 2.3.1 On lower priority routes both on carriageways, lay-bys and footways, grit bins should be provided where they can be sited without inconvenience or danger to residents and road users. Due to the demand on resources to fill grit bins, it has been decided not to increase the number of grit bins. Alternatively, 1T salt bags will be made available for community use (see 2.3.4). The location of the grit bins can be viewed on the council's web site at: https://maps.aberdeencity.gov.uk/LocalViewWeb/Sites/Gritboxes/
- 2.3.2 Grit bins are maintained and kept filled by the Council so that the salt, salt/sand mixtures are readily available to Council employees, local residents or any other road user should they choose to use the facility. The locations and condition of all grit bins should be reviewed annually in late summer/autumn. It should be noted that whilst making use of grit bins, care should be taken as it is common for them to be used by some members of the public for the disposal of rubbish, such as glass, sharp metal and, in some instances, syringes which could result in injury to the user should they inadvertently come into contact with this material. Hazard warnings should be positioned on the lid of the grit bin
- 2.3.3 It is recommended that all grit bins be highlighted for public use with a telephone number to call allowing members of the public to inform on the location of the empty grit bin. Calls will be monitored on a daily basis during the winter and twice daily during periods of snow and ice. Holidays and weekends will be excluded as resources are limited.
- 2.3.4 1 Tonne bags of salt will be issued on request to Community groups for self help winter treatment. These bags will be issued and replenished on condition that they are situated in a secure location which is accessible to the Council delivery lorry. A communal area such as a car park would not be acceptable as the bags will be susceptible to theft and vandalism. Additionally, a number of smaller bags shall be offered to the person requesting the 1 Tonne bag to aid distribution of the salt in the community.
- 2.3.5 Large Community Grit Bins have been located throughout the city these are specifically located to allow rapid replenishment from small lorries during storm conditions. The locations are listed in Appendix (D,a)
- 2.3.6 Individual salt buckets containing approximately 10kg of salt are available from depots. The 10kg is sufficient to treat the footway fronting a property for a number of days.

#### 3. <u>Treatments of Conditions</u>

#### 3.1 <u>Precautionary Salting - Priority 1 routes and locations of particular hazard.</u>

Precautionary treatments should be carried out to as per Appendix (D,b) Column C. This table is based on guidance issued by the Society of Chief Officers of Transportation in Scotland (SCOTS) Winter Service Subgroup.

Column C is appropriate when the Salt Cover is Poor, Traffic Levels are Low/Medium and the Salt Loss due to traffic is Normal.

#### Precautionary Treatment for Hoar Frost and Ice.

3.1.1 If the road temperature is at or above -2C and the road is damp, salt at a rate of 10 grams per square metre. If the temperature falls between -2C and -5C and the road is damp, salt at 15/20g per square metre. If the road is damp and the temperature is below -5C, salt at 20g per square metre, monitor conditions and retreat if required.

If the road temperature is at or above -2C and the road is wet, salt at a rate of 15 grams per square metre. If the temperature falls between -2C and -5C and the road is wet, salt at 20g per square metre. If the Road is wet and the temperature is below -5C, salt at 20g per square metre, monitor conditions and retreat if required.

When rain is forecast prior to frost/ice, treatment should be timed to commence at the cessation of rainfall subject to being completed within the council's hours of coverage.

3.1.2 When frost/ice is predicted after rain precautionary salting rates should be increased to 20-40 g/sq. m according to the temperatures expected. 20 g/sq. m will operate down to - 2 degrees Celsius, 40 g/sq. m operates to -5 degrees Celsius. Salting should be delayed as long as possible to reduce loss of salt by run-off unless freezing conditions coincide with the rainfall. Road conditions are to be monitored and retreated if required. The situation is to be monitored and retreatment carried out if required.

#### 3.2 <u>Precautionary Treatment for Snow.</u>

- 3.2.2 When continuous snow/freezing rain is forecast precautionary salting rates are to be 20-40 g/sq. m according to the anticipated severity of the snowfall as per Appendix (D,c)
- 3.2.3 The maximum salt spreading rate recommended for melting up to 50mm of fresh snow is 40 g/sq.m. Repeated applications of salt can remove heavy accumulations of snow, however, this approach is not recommended and <u>ploughing should be undertaken as the depth of snow starts to exceeds 10mm.</u> 20g per square metre of salt should be applied in advance of a snowfall to allow the formation of a debonding layer and assist subsequent ploughing. Where more than 50mm of snow has accumulated, compaction by traffic is likely to become problematic.
- 3.2.4 These spread rates are dependent on available salt stocks, during periods of sustained snow salt availability may be restricted due to availability or instructions from outwith the council, and periods of salt conservation may be necessary as per section 7.0)

#### 3.3 Treatment for Ice and Compacted Snow Conditions

When ice or compacted snow has already formed the surface should be treated as be the guidance in Appendix (D,d).

3.3.1 When temperatures drop below -5 degrees Celsius it is advisable to use grit or salt/grit mixtures. The grit used in these circumstances should be single particle size 6mm – 2mm having low fine content. The particles should be angular suitable for an abrasive. Grit shall only be used when absolutely necessary due to additional problems arising, such as sweeping and gully emptying and the subsequent additional costs for waste disposal.

#### 3.4 Updated guidelines on salt spread rates

3.4.1 The Society of Chief Officers of Transportation in Scotland (SCOTS) have produced recommendations on the most appropriate and practical approach to implementing salt spread rates. Following consultation with the National Winter Service Research Group (NWSRG), concerning the implementation of Well Managed Highways, the SCOTS Winter Subgroup have suggested a number of developments and those relevant to salt spread rates.

Minimum spread rates of unmodified salt are suggested in Appendix (D,b) treatment matrix for different operational scenarios out-with resilience situations.

Detailed below is the justification provided by the SCOTS Winter Service Subgroup for advising these variations and this is supported by Aberdeen City Council officers.

- Review conclusions based on significant experience of delivering winter service by Scottish local Authorities.
- Review conclusions based on developed best practice within Scottish local Authorities.
- Recognition that going forward that these variations to Well Managed Highways and the successor document, need to be monitored in relation to the development of equipment, research undertaken and revisions to recommended salt spread rates.
- These variations to salt spread rates need to be kept under review by the SCOTS Roads Group/SCOTS Winter Service Subgroup to continue to inform the most appropriate approach to Winter Service to be taken by Scottish Roads Authorities.
- The treatment matrix developed through the SCOTS Winter Sub group is being adopted by Aberdeen City Council and is detailed in Appendix (D,b) along with associated notes.

#### 4. <u>Winter Service Plant</u>

To be effective, salt must be spread evenly at rates to suit prevailing conditions. The spreading equipment supplied should be to BS 1622:1989. The controls of spreading machines are to be calibrated annually and clearly marked for distinct spread rates up to 40g/sq.m.

#### 5. Salt and Grit

- 5.1.1 Salt supplied to various locations throughout the City shall be to BS 3247.
- 5.1.2 Grit for use either neat or in mixtures shall be single sized abrasive or particle size 6mm
   2mm having a low fine content. The particles should be angular in shape suitable for an abrasive.
- 5.1.3 Chemical de-icing treatment may to be used at selected locations including the city centre and cycleways.
- 5.1.4 Salt is purchased to restock the storage areas to their maximum stock levels in advance of the season, salt stocks are closely monitored, and restocking orders placed to maintain suitable levels.
- 5.1.5 Salt at storage areas are currently stored uncovered.
- 5.1.6 A guide to appropriate maximum and minimum and resilience stock levels are included in Appendix (D,e).

#### 6. <u>Communications</u>

- 6.6.1 Work has been carried out with the Corporate Communications Team and the Service Design and Development team to provide up to date information on the Council Web Site. The information provided will enable members of the public to check on expected road conditions, confirm main gritting routes and check action currently underway. There is also a section to check the weather and road conditions.
- 6.6.2 City Voice Questionnaire including several questions relating to the general public's satisfaction with Aberdeen City Council's winter performance will be issued to the general public following the 2017 18 winter season. This questionnaire is repeated annually as part of the Roads Asset Management Plan to build up a picture of the trend of public satisfaction related to the severity of the winter weather. It may also indicate areas for improvement or future action within the limitations of the winter budget.

#### 7. <u>Resilience</u>

- 7.1.1 If salt stock levels fall close to the resilience stock levels indicated in Appendix (D,e) the Roads Operations Manager will consider and implement the actions required to maintain traffic flow along the strategic network.
- 7.1.2 In extreme circumstances that may have a major adverse impact on the provision of the winter service the Roads Operations Manager after consultation with the Roads Infrastructure Manager may implement the actions required to maintain traffic flow along the strategic network these may include but are not restricted to:
  - Reduce salt spread rates.
  - Restrict salt spreading to the Priority 1 routes.
  - Move to using salt/grit mixes.
  - Move to using grit only on Secondary routes

- Grit only to be used on hard packed snow on priority/secondary/cul de sac routes Replenish Grit Bins with grit only Move to using grit only on priority and secondary footway routes •
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ABERDEEN CITY COUNCIL

OPERATIONS

**ROADS OPERATIONS** 

WINTER SERVICE PLAN

2019-2020

**PART 2 - OPERATIONAL PLAN** 

#### WINTER SERVICE DOCUMENT

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#### **Appendices**

- A Emergency Contacts
- B Duties of Personnel
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#### WINTER SERVICE PLAN - STANDING ORDERS

#### PART 2 - OPERATIONAL PLAN

#### 1. Introduction

#### 1.1 Outline

The Operational Plan is designed to provide for a twenty-four hour a day, seven days a week service. The plan, which is designed to be flexible enough to cover all foreseeable weather conditions normally experienced in this part of the country, will operate in various phases according to the time of day and weather conditions.

The plan consists of an emergency standby service out with normal working hours, regular routine patrols by specialist gritting and snow clearing vehicles in the early hours of the morning augmented, as necessary, by the use of the Council's normal heavy goods vehicles fitted with demountable snowploughs and/or gritter bodies as appropriate. The Council's own resources can be augmented by hired labour and vehicles and plant from local contractors.

#### 1.2 Stages of the Plan

In deploying the Council's resources and resources from other Services, Superintendents will take into account the priorities drawn up to cover all weather conditions, will seek to ensure that the road network is dealt with in the sequence and to the standards set out in Part 1, Section 2 headed "Priorities and Standards".

Superintendents in planning and executing the Winter Service Operations must give consideration to the needs of all employees to have reasonable periods of rest between periods of duty, however, in extreme and prolonged weather conditions Aberdeen City Council can declare the event an emergency to continue with winter service operations.

#### 1.3 Delegation of Responsibilities

- 1.3.1 The Roads Infrastructure Manager is responsible for the work of the Roads Services throughout the City. The Roads Infrastructure Manager is responsible for formulating the policy objectives with regard to Winter Service operations and ensuring that adequate resources are allocated to meet the objectives and standards set in the Specification Document. The Roads Infrastructure Manager is also responsible for ensuring that the Specification and Operational Plan are continually reviewed in the light of experience and changing circumstances.
- 1.3.2 The Roads Infrastructure Manager in conjunction with the Road Operations Manager will be wholly responsible for ensuring that Winter Service operations are carried out in accordance with the policy of the Council and in accordance with accreditation in Winter Maintenance Quality Assurance under ISO 9001. They will ensure that the Duty Officers and the Superintendents and operators are conversant with the Winter Service Plan and will ensure that the standard of training, etc. of the operatives is sufficiently high to enable them to carry out their allotted tasks. The day to day responsibility for producing the daily Winter Maintenance Advice Sheet may be delegated to the Duty Officer. The

Superintendents shall be provided with the physical resources to enable them to carry out the work within the limitations of the budget and shall have the authority to utilise all the resources available to them on normal works in the event of adverse weather conditions. The day to day responsibility for the organisation and supervision of Winter Service operations may be delegated to the Superintendents.

1.3.3 The Superintendents are wholly responsible to the Roads Infrastructure Manager/Road Operations Manager for the day to day organisation and execution of the Winter Service operations and will take immediate action to implement the Winter Service Plan on receipt of adverse weather advice or in the event of sudden frost or snowfall. The Superintendents have complete authority to set the plan in action without reference to the Roads Infrastructure Manager or Road Operations Manager but shall at all times keep the Management fully advised of the prevailing circumstances with regard to the progress of Winter Service operations and shall seek the advice and assistance of Management in dealing with any augmented work undertaken or conditions outwith the scope of the Winter Service Plan.

#### 2. <u>Working Arrangements</u>

#### 2.1 Operating period

The winter operating period will run from October to April each year.

The core period for continual monitoring will run from early November until Late March. Additional support staff and assistance from other services will run from mid-November until late March, the exact dates will be as detailed below, these dates are subject to change depending on the forecast weather conditions.

#### 2.2 <u>Standby Service – 11/11/2019 to 16/03/2020</u>

A weekly duty rota for drivers and plant operators for both the standby service and for the early morning patrols will be prepared to ensure that all specialist Winter Service vehicles can be manned on a twenty-four hour, seven days a week basis in accordance with the Winter Service Plan.

Specialist Winter Service vehicles will be stationed at appropriate depots for immediate use outwith normal working hours. The vehicles will be loaded with neat salt and drivers will be contactable to receive instructions from the Superintendent. A Superintendent will be available to receive telephone calls from the Police or other responsible Officers of the Council, assess road conditions and initiate emergency actions.

On receipt of an emergency call, the Superintendent will assess the situation and, if necessary, will call out the standby crews to treat roads as required, he may at his discretion, alert other Superintendents, as it may be necessary to call out additional drivers and vehicles.

The Superintendents will advise the Night Attendant or the Duty Officer what resources are deployed and the route/areas being treated to allow the Council's web site to be updated.

The standby drivers will report to the Superintendent the road conditions at the area of the particular hazard and in the area generally. The Superintendent will log the telephone call seeking assistance together with the details of any action taken in response to it and any action by way of treating other locations so that there is a permanent record, for inspection, of the extent of Winter Service operations carried out.

#### 2.3 Early Morning Patrols – 11/11/2019 to 16/03/2020

The specialist Winter Service vehicles will be operated on early morning patrol service during the winter period. Each vehicle will be driven on a prescribed priority route and treatment will be carried out as instructed for the conditions encountered.

The Superintendent will advise the Night Attendant or the Duty Officer what resources are deployed, and the route/areas being treated to allow the Council's web site to be updated.

Special attention will be given to those locations, which are designated as areas of particular hazard; drivers will report the road conditions on their prescribed route to the Superintendent/Night Attendant both during and on completion of their patrols.

Additionally, the Superintendents may at their discretion, if adverse weather conditions are expected, detail additional operatives to make themselves available for standby duties/early action.

#### 2.4 Service Within Working Hour

2.4.1 If road or weather conditions warrant it, Winter Service operations utilising the specialist vehicles will continue during the course of the working day. In addition to the specialist vehicles, the Superintendents can instruct the use of the Councils normal heavy goods vehicles on Winter Service operations. The vehicles will be fitted with snowploughs and/or gritter bodies according to the road conditions.

The Superintendents will advise the Night Attendant or the Duty Officer what resources are deployed, and the route/areas being treated to allow the Council's web site to be updated.

#### 2.4.2 Daytime 8.00 a.m. - 4.00 p.m. Monday - Friday

The ice detection equipment will be monitored by the Road Services staff. When a change in conditions is displayed at any of the ice detection locations in his area, the Road Operations Manager or his staff will advise the Superintendents who, taking account of all factors known to him, will dispatch a gritting vehicle to inspect and treat conditions at the location as necessary and thereafter proceed to such other locations the Superintendents considers may require treatment.

#### 2.5 Service Outwith Normal Working Hours 02/11/2019 to 14/03/2020

2.5.1 Response will provide an emergency all night service and specialist Winter Service vehicles will be ready for immediate use throughout the winter season.

The vehicles will be loaded with neat salt and drivers will be in attendance at the depot. In addition to the drivers the depot will be manned by a Duty Night Attendant who will receive telephone calls from the Met Office, Police or other responsible Officers of the Council initiating emergency action.

The Duty Officer will continue to monitor the ice detection equipment and forecast and will remain the point of contact for Winter Service along with the Duty Superintendent until the Night Attendant commences work at 20:30.

On receipt of an emergency call, the Duty Night Attendant will despatch a driver to investigate and, if necessary, treat the road surface. Immediately after the driver has dealt with the specific complaint, he will travel to those locations designated as areas of particular hazard in the vicinity of the locus of the complaint and, if necessary, treat the road surface at these locations. He will report to the Duty Night Attendant the road conditions at the areas of particular hazard and in the area generally. The Duty Night

Attendant will log the telephone call seeking assistance together with the details of any locations so that there is a permanent record for inspection by the Duty Superintendent of the extent of Winter Service operations carried out during the night.

Should it appear to the Duty Night Attendant from the number of telephone calls received requesting assistance or from the reports received from drivers that the road conditions are so bad as to require the deployment of more resources than provided by the all night service, he will immediately telephone the Duty Superintendent advising him of the conditions so that the Duty Superintendent may, at his discretion, instruct the call out of additional drivers and vehicles.

- 2.5.2 When an adverse change of conditions is displayed at any of the ice detection locations in the City, the Night Attendant will dispatch a loaded gritter to inspect and treat conditions at the location as necessary and thereafter, taking account of all other known factors, proceed to treat as necessary areas of special hazard. The Duty Night Attendant will log the change in road temperatures together with his actions and details of any locations actioned so that there is a permanent record for inspection by the Duty Superintendent of the extent of Winter Service operations carried out during the night.
- 2.5.3 Over Christmas and New Year a stand by crew will only be available to treat priority 1 carriageways and footways on the days of the 25 26 December and 31 December 2 January inclusive.

#### 2.6 Footway Treatment

The Priority 1 footways for treatment are listed in Appendix C (e).

The standard practice for treating footways will be to use neat salt although discretion is given to Superintendents to use salt/grit mixtures when weather conditions warrant it, and especially when dealing with ice that has formed as a result of the re-freezing of partially thawed snow as per Appendix D, (d)

In clearing a passage for pedestrians, any cleared snow will be left piled at the edge of the footway until resources are available for its removal. Special attention will be given at pedestrian crossings, road junctions where large number of pedestrians cross, bus stops etc where gaps should be left at these locations to allow pedestrians to cross without having to negotiate the heaped snow.

Special care will also be taken to ensure that street gullies are not blocked by piled snow, as this would prevent water draining away at the onset of a thaw.

#### 2.7 Footway Readiness

Recourses for footway treatment are to be allocated on a three-level readiness basis. The readiness level shall be implemented and recorded following discussions between the duty officer and the Roads Operations/Roads Infrastructure Manager.

#### Green:

Forecast conditions to be below zero for up to 5 consecutive days.

City centre routes to be check by Superintendent each morning with treatment undertaken if required, no other routes to be treated.

#### Amber:

Forecast conditions of prolonged freezing extending beyond 5 days, snowfall or extensive ice forecast. Frontline staff to be made available for prolonged treatment, assistance from other departments requested as required. If other departments assistance required, they are to be notified when Amber condition is identified.

Grit bins and Community Bins, checked and filled in advance, Footway plant and equipment checked for readiness in advance, Priority 1 Footways and sheltered housing areas considered for treatment.

Additional back office staff requirement to respond to public enquiries.

#### Red:

Forecast conditions as Amber but with continued heavy snowfall or extreme ice in forecast resulting in a risk to infrastructure.

Action as per Amber, additionally external and supplementary resources from other departments to be mobilised as available.

Treatment to be extended to area footway treatment beyond Priority 1 routes as resources allow.

Full reporting system to be implemented, availability of resources to respond to repair to infrastructure to assessed. Additional back office staff requirement to respond to public enquiries regarding infrastructure damage after thaw develops.

#### 2.8 Thawing

During the thaw, the first responsibility of the Superintendents will be to ensure, as far as practicable, that road channels and verges are cleared in the area of street gullies and cross grips to allow melted snow to drain away. Only after the channels and cross grips have been cleared should an attempt be made to clear the stockpiled snow.

#### 2.9 Lifting of Snow from Roads etc

In extreme conditions after heavy snow falls it may be necessary to lift snow from streets. Snow cleared from the road will only be uplifted in exceptional circumstances, e.g. where existing piled snow is preventing further snow clearance from the road.

#### 3. Information

#### 3.1 <u>Communications</u>

<u>During Office Hours</u> - Mondays to Fridays inclusive, telephone messages will be received by the contact centre.

<u>Outwith Office Hours</u> - Telephone messages to be passed to the Duty Superintendents (Daytime) or the Duty Officer as per rota from 16:00 to 20:30 (Monday to Friday) from 08:00 to 20:30 (Saturday, Sunday & Public Holidays) and to the Night Attendant at West Tullos Depot from 20:30 to 08:00.

#### 3.2 <u>Weather Forecasts</u>

The Council's meteorological advisors will provide information for the duration of the winter period including:-

- a) General Forecasts for the following 36 hours
- b) 2-5-day outlook forecast
- c) Air and road temperatures and a predicted forecast graph

#### **During Office Hours**

The Forecast data information is assessed and entered into an advice sheet prepared by the Duty Officer in conjunction with the Duty Superintendent and if required submitted to the Roads Operations Manager for discussion and a decision made as to the required treatment. Roads Operations Manager to be advised of daily action.

The information will also be passed to the Standby Superintendent by the Duty Officer.

#### Outwith Office Hours and Holidays

It will be the responsibility of the Duty Officer to obtain the weather forecast, consult Superintendent and confirm action. Superintendent to contact the Night Attendant at West Tullos Depot each day shortly after 20:30 hours to appraise him of the situation. If there is a forecast of severe weather the Standby Superintendent should also be informed. Roads Operations Manager to be advised of daily action.

#### **Emergency Weather Forecasts**

The Council's meteorological advisors will inform the Duty Officer from 08:00 to 20:30 or the Night Attendant from 20:30 to 08:00 to advise on changes in forecast information. Additional phone numbers should be supplied to the Met Office in case there is difficulty in contacting the Duty Officer or the Night Attendant. The Duty Officer or the night Attendant will advise the Duty Superintendent of changes to the weather forecast which may alter the proposed winter treatment.

#### 3.3 Advice Sheets

#### 3.3.1 Winter Maintenance Advice Sheets

Forecast information and the Winter Maintenance Advice Sheet will be used to assist in decision making. In the absence of any indication or information to the contrary the advice recommendation given on the Advice Sheets should be followed.

#### 3.3.2 Interpretation of Advice Sheets

The Advice Sheets recommendations may not be followed if:

- (a) A clear emergency exists which requires immediate action
- (b) The Road Operations Manager advises differently.
- (c) The actual weather (e.g. as measured by Ice Outstations) is at variance from the forecast such that action taken would need to be significantly different from that advised, e.g. the stepping up of salting from 10 to 20 g/sq. m or equivalent in mixtures, or if the forecast of snow turns out to be rain then reducing or changing the treatment. In this case the meteorological advisors should be contacted, advised of actual weather conditions and new forecast information requested.

#### 3.3.3 Variation from Advice Sheets

A record will be kept of all variations of action from the advised action on the advice sheet. The reason for such a variation will be noted on the advice sheet for record purposes.

#### 3.3.4 General Note

The Council's meteorological advisers are available 24 hours a day and can be contacted at any time by superintendents or staff for advice. They are contracted to supply new weather information when a significant change is forecast and to give advice over the telephone on all meteorological matters. If in any doubt about the actual weather and/or the forecast the rule is contact the meteorological advisers.

#### 3.4 Road Condition Reports

In order that the Roads Infrastructure Manager can be kept advised of the road conditions throughout the City, reports on road conditions will be passed as follows.

The Road Operations Manager will arrange for the daily road condition report and the advice sheet to be completed not later than 0800 and 1600 hours on days of continued action to be recorded on the standard pro-forma and for the information to be forwarded to Roads Infrastructure Manager.

#### 4. <u>Plant</u>

#### 4.1 Availability and Maintenance of Vehicles, Plant etc

All specialist Winter Service vehicles, plant and footway snowploughs require to be maintained and overhauled prior to the commencement of Winter Service operations. All items of Winter Service equipment overhauled shall be on station not later than the end of September in order that calibration works can be carried out to all plant at the same time.

All footway snowploughs shall be on station by the second week in October. All dedicated gritting vehicles shall be calibrated by end of October and signed calibration sheets filed for future reference.

All vehicles, plant and equipment shall be checked to ensure they are fully operational on return to station.

A stand by mechanic will be available at all times during the winter period to carry out routine maintenance and minor repairs allocated to him. Where applicable the six week safety checks on vehicles should be carried out during early morning operations when no action is being carried out, any major defect found during this period will require the vehicle to be taken to Kittybrewster for repair. Fleet Services to provide the Road Operations Manager and the Superintendents with a rota of the mechanics.

#### 4.2 Operation of Vehicles

While it is acknowledged that the drivers of vehicles engaged in Winter Service operations do not operate under normal circumstances, it is nevertheless the driver's duty to take every precaution to avoid accidents.

Once the vehicles are on station and Winter Service operations have begun, it will be the duty of the driver and/or operator for each vehicle and item of plant to check his vehicle daily before starting duty. The inspection shall cover the fuel, oil and water levels and the lights, brakes and tyres, together with all bolts and couplings fixing ploughs, spinners and safety rails.

Any fault revealed by the check shall be immediately reported to the Superintendent who will call out the stand by mechanic to determine whether or not the vehicle is in a fit state to continue with Winter Service operations or whether the vehicle should be withdrawn from service for immediate repair at the Depot or transported to Kittybrewster. In the latter case the Superintendent, in consultation with the Repair Depot Supervisor, shall decide whether or not, depending on the length of time that any repair is likely to take, an alternative vehicle should be made available as a replacement for the unserviceable vehicle.

The amber flashing lights fitted to each vehicle must be kept in operation during gritting and snow clearing operations. In poor visibility, the vehicle's horn should be sounded as necessary, but its use should be kept to a minimum consistent with safe driving and the need to cause as little inconvenience as is possible to residents, particularly during early morning and late night working. Any vehicle engaged in Winter Service operations must not be driven at speeds in excess of 20 mph in urban areas or where traffic is heavy, the speed should be further reduced to ensure the flying grit/sand does not injure pedestrians or damage other vehicles on the road. A "SPREADING" sign is to be fitted and kept clean on rear of gritting and large snow plough vehicles.

Snow ploughs and scrapers must always be raised above the road surface when passing over sections of road which are clear of snow and ice and drivers should constantly be on the lookout for manhole covers, street tobies or other obstructions such as traffic calming measures which may be standing proud of the road surface.

It is the responsibility of the driver of any vehicle to ensure that the hopper or the platform of this vehicle is not left loaded with salt or salt/sand mixture for more than forty-eight hours. If the salt or salt/sand mixture has not been used for this period of time, the hopper and/or platform should be emptied and immediately refilled with fresh material.

If the vehicle has been driven during heavy rain, the driver should check the salt or salt/sand mixture to ensure that caking has not taken place. If it has, the vehicle should be emptied and immediately refilled with fresh material.

Where mobile phone communication is used the driver must not under any circumstance answer the phone until parked safely and the engine is turned off as per the Council's mobile phone policy. Drivers will be issued with a radio for communication purposes.

#### 5. <u>Materials and Equipment</u>

#### 5.1 Salt and Salt/Sand Stocks

#### Salt

Stocks of salt will be built up to the predetermined levels indicated in the contract requirements. It will be the responsibility of the salt supplier to maintain the agreed stock levels at all storage points as per the predetermined schedule. It will be the responsibility of the Duty Superintendent and Duty Officer to make a daily update on salt usage and a weekly return of salt receipts and issues to the Road Operation Manager.

#### Salt/Sand mixtures

Sand will be kept available to be mixed with salt in accordance with the instructions of the Superintendent for that area and will generally consist of one parts sand to one part salt by weight but this mixture may be varied at the discretion of the Superintendents depending upon road and weather conditions.

#### 5.2 Use of Materials

In general, neat salt will be used on all roads. The use of neat salt or of the salt/sand mixture may be varied at the discretion of the Superintendent depending upon road and weather conditions.

It shall be the responsibility of the Superintendents to ensure that all salt stores are allocated a loading shovel and that the stores are manned continuously during periods of extreme weather or when general Winter Service operations are being carried out.

During the spreading of salt, especially in built-up areas, care must be taken to keep salt clear of trees, hedges, shrubs, lawns etc.

Should hard packed snow and ice occur, a trial will be carried out using Ecothaw de-icer and a comparison made with roads and footways treated with salt.

#### 6. Assistance from Third Parties

#### 6.1 Local Authority Services

Other Local Authority Services may undertake the gritting/salting, and/or snow clearing of footways and/or roads in designated areas, by arrangement agreed prior to the onset of winter.

#### 6.2 Education

Winter Service within the City's educational establishments are dealt with under separate arrangements within the Council

#### 6.3 <u>Parks, Cemetery accesses, Crematoria access, Sheltered Housing accesses,</u> <u>Unadopted Footways through Council Housing Areas and Other Council Property</u> <u>accesses</u>

Priority Roads and Footways in these areas will be treated under contract by other Council Services. Operations will normally be carried out during the standard working day and will be co-ordinated by Operations and Protective Services they will be informed of the prevailing conditions and whether they are required to carry out winter service operations outside normal working hours. A standby rota will be produced to cover weekend operations. A list of priority locations are detailed in Appendix C (h).

#### 7. Road Closures

#### 7.1 Road Closures

The closure of a road under severe winter conditions can only be authorised by the Police but operationally the signs could equally well be put out by the Police or Roads Staff. It is absolutely essential that there is consultation and co-operation between the two bodies in the issue of the signs e.g. for a closure instigated by the Police during the night, the Duty be informed as soon as possible and where the closure initiative came from the Roads Staff that the Police be contacted immediately. Duty Officer will be informed by 08:00 of any road closures and openings. If a road is closed signing should be maintained until the road is reopened. Roads Operations Manager or a duty representative will be required to inform Roadworks Coordination and Communications of any road closures.

#### 8 <u>Road Treatment Logs</u>

A "Road Treatment Log" will be kept by each gritter driver to show the times treatment is necessary. The log will also show the road conditions encountered and the approximate tonnage of the material used. These sheets are to be completed daily by the gritter drivers and returned to the Superintendents each day.

#### **ABERDEEN CITY COUNCIL**

#### **OPERATIONAL PLAN APPENDICES**

- A: EMERGENCY CONTACTS
- B: DUTIES OF PERSONNEL
- C: GRITTING/TREATMENT
- D: ROUTES TREATMENT AND STOCK GUIDANCE

#### OPERATIONAL PLAN APPENDIX A - EMERGENCY CONTACTS

Call Centre Number

03000 200292

## FOR WINTER "CALL-OUTS" PLEASE NOTE

24 hours / 7 days Call Centre Number

03000 200292

#### OPERATIONAL PLAN APPENDIX B - PERSONNEL 1 - DUTIES OF PERSONNEL

#### Duties of the Gritter Drivers

1. Duty Period: Monday - Saturday Start 04.45am Sunday and Public Holidays Start 06.00am

In addition, when on standby during period of duty, make himself available for call-out by request, during emergency.

Maximum duty period will be 11 hours (10 hours driving unless a declared emergency and driver fit to drive).

- 2. Location: At Depot detailed by Duty Superintendent
- 3. Communication Radio
- 4. Responsible to the Duty Superintendent
- 5. <u>Responsibilities</u>
  - a) To carry out a First Use Vehicle Check.
  - b) Drive gritting vehicle along route as detailed on satellite navigation system or to verbal instructions of Duty Superintendent/Night Attendant, ensuring that carriageways are adequately gritted for the conditions prevailing.
  - c) Maintain communication with the Duty Superintendent/Night Attendant advising when treatment of a route/area is started and completed.
    - 1) Provide an update of road and footway conditions when requested
    - 2) Advise duty Superintendent/Night Attendant when required to deviate from programmed route.
  - d) During actual gritting and snow clearing operations, the amber flashing beacon must be used. Speeds in excess of 20mph (32kph) are prohibited.
  - e) In the event of a breakdown of his vehicle or any incident, which prevents him carrying out his allocated duty, he will advise the Duty Superintendent/Night Attendant by radio and await further instructions.
  - f) Complete daily winter maintenance treatment log and other such relevant documentation and pass to the Duty Superintendent/Night Attendant by the end of the next working day
  - g) To wash down gritter/spinner after use, clean and tidy the cab and top up fuel.

#### Duties of the Response Drivers

- 1. Duty period: 04:00 to 15:30 & 15:30 to 03:00
- 2. Location: Tullos Depot and work locations detailed by Superintendent
- 3. Communication Radio
- 4. Responsible to the Duty Superintendent
- 5. <u>Responsibilities</u>
  - a) Complete a First Use Vehicle Check before leaving the depot.
  - b) While he may be involved in routine maintenance work, he must be prepared to react immediately to a call-out request which will be initiated by a radio instruction from the Night Attendant/Duty Superintendent.
  - c) On receipt of a call-out he will proceed to location and deal with the condition, maintaining communication with the Night Attendant/Duty Superintendent advising him when the matter has been dealt with.
  - d) Drive gritting vehicle along route as detailed on satellite navigation system or to verbal instructions of Duty Superintendent, ensuring that carriageways are adequately gritted for the conditions prevailing.
  - e) Relay information back to the Night Attendant/Duty Superintendent on any action taken at the locations, the state of the roads and any action taken at any other locations.
  - f) Deal with all requests from the Night Attendant/Duty Superintendent until return to Depot when he will again resume his other allocated duties.
    - 1) Provide an update of road and footway conditions when requested.
    - 2) Advise Duty Superintendent/Night Attendant when required to deviate from programmed route.
  - g) In the event of a general call-out he will operate in the location advised by the Duty Superintendent/Night Attendant.
  - h) In the event of a breakdown of his vehicle or any incident, which prevents him, carrying out this allotted duty, he will advise the Night Attendant/Duty Superintendent by radio and await further instructions.
  - Complete daily winter maintenance treatment log and other such relevant documentation and pass to the Duty Superintendent/Night Attendant at the end of the shift.
  - j) To wash down gritter/spinner after use and clean and tidy the cab and top up of fluids also required.
     <u>Duties of the Duty Superintendent/Standby Superintendent</u>

| 1.Duty Period: Duty Superintendent04:45 – 106:00 – 1 | 15:45<br>16:00 Sundays + Public Holidays |
|--|--|
|--|--|

Standby Superintendent 15:45 – 04:45 15:45 – 06:00 Sundays + Public Holidays

- 2. Location: West Tullos Depot
- 3. <u>Communication</u>

The Superintendent will be equipped with a mobile phone and a radio for communication.

- 4. Responsible to the Roads Operations Manager, Operations, Roads.
- 5. <u>Responsibilities</u>

Overall responsibility for the day to day operations of the Winter Service function.

- a) On receipt of Winter Maintenance Advice Sheet, initiate appropriate action, utilising Night Attendant as necessary, including advising drivers on spread rates to be applied.
- b) Ensure that gritters, lorries, plant and ancillary equipment are maintained in operational condition and located at the appropriate Depots and that adequate supplies of salt and sand are available.
- c) Ensure that drivers and operators are conversant with operational details.
- In the event of severe conditions, which exhaust the capacity of his resources, advise the Road Operations Manager of the short fall in resources.
- e) To react to outside agency's requests and advise them, as necessary, when adverse conditions require their action and render support in plant and labour resources as necessary. Discuss with Roads Operations Manager or Duty Officer where this compromises treatment in the road network.
- f) In the event of the breakdown of a vehicle, report defect to the appropriate workshop.
- g) Complete a daily log of vehicles and plant breakdowns.
- h) To ensure all call-out requests are logged in Log Book indicating time received, time accident dealt with and by which vehicle.
- i) Ensure that drivers logs are maintained, and to ensure that the treatment and spread rates comply with his instruction on a daily or weekly basis.

- j) To advise the Road Operations Manager or the Duty Officer each day not later than 07:00 on the road conditions prevailing and the action taken and to compile a morning stat report each day no later than 07:00 (08:00 on Sundays and public holidays).
- k) If continuing action maintain and complete Continuing Action Form
- I) During all operations the Superintendent must keep either the Night Attendant or the Duty Officer advised when action is taken on each route/area and also when action ceases. Total resources deployed on each route/area must also be communicated. It is vital that this information is accurate and given timeously in order that the Council's website reflects exactly the action being undertaken on the ground.

#### Duties of the Duty Officer

- 1. Duty Period: 1 week commencing with issue of midday forecast on Monday morning to completion of morning treatment the following Monday midday
- 2. Location: Duty Officer's Office or Residence as necessary.
- 3. <u>Communication</u>

The Duty Officer will be equipped with a mobile phone and radio for communication.

- 4. Responsible to the Road Operations Manager, CHI
- 5. <u>Responsibilities</u>

Responsibility for interpreting the daily forecast to produce the daily Winter Maintenance Advice Sheet and ensuring that relevant parties are informed of the proposed action.

- a) On receipt of weather forecast, and telephone contact with Met Office if necessary, decide on appropriate winter treatment and spread rates for the coming afternoon, night shift and following morning. Check updated forecast at 18:00 and amend action plan as necessary with stand by superintendent.
- b) Complete Winter Maintenance Advice Sheet and issue to Duty Superintendent. Duty Superintendent to be contacted by telephone/radio if not available in West Tullos Depot.
- c) Issue Winter Maintenance Advice Sheet to night attendant.
- d) As necessary issue Winter Maintenance Advice Sheet to appropriate parties.
- e) Update Weather Conditions on Council Website on a daily basis.
- f) Update Council Website at the start of each treatment and on completion of each treatment.
- g) Complete the Winter Maintenance Advice Sheet after the following morning's treatment, detailing any change from the proposed action and recording actual temperatures and conditions from the previous 24 hours.
- h) Advise Roads Operations Manager of salt tonnage used on a daily basis.
- i) Consult Roads Operations Manager concerning current salt stock levels and the impact this may have on limiting proposed winter action.

#### Duties of the Night Attendant

- 1. Duty period: 8:30 pm to 8.00am
- 2. Location: West Tullos Depot
- 3. Communication Telephone and radio
- 4. Responsible to Duty Superintendent/Stand-by Superintendent/Superintendent
- 5. <u>Responsibilities</u>
  - a) To accept by telephone, all call-out requests from Police Scotland
  - b) To log all calls in Log Book indicating time received, time incident dealt with and by which vehicle.
  - c) To dispatch drivers, who are in attendance to the requested locations.
  - d) In the event of demand significantly exceeding capability, telephone Standby/Duty Superintendent who will assume control and instruct as necessary.
  - e) In the event of a report that a vehicle is out of commission,
    - 1) he will use alternative standby vehicle or driver if available
    - 2) if not available, advise Stand-by/Duty Superintendent who will assume responsibility.
  - f) Ensure that he receives information and immediately updates the Council's website to reflect the current position on the ground
  - g) Monitor weather forecast and graphs and recording actions taken
  - h) From 06:30 compile morning status report by 07:00 and distribute to Roads Operations Manager, Duty Superintendent and Duty Officer.

#### Duties of the Road Operations Manager

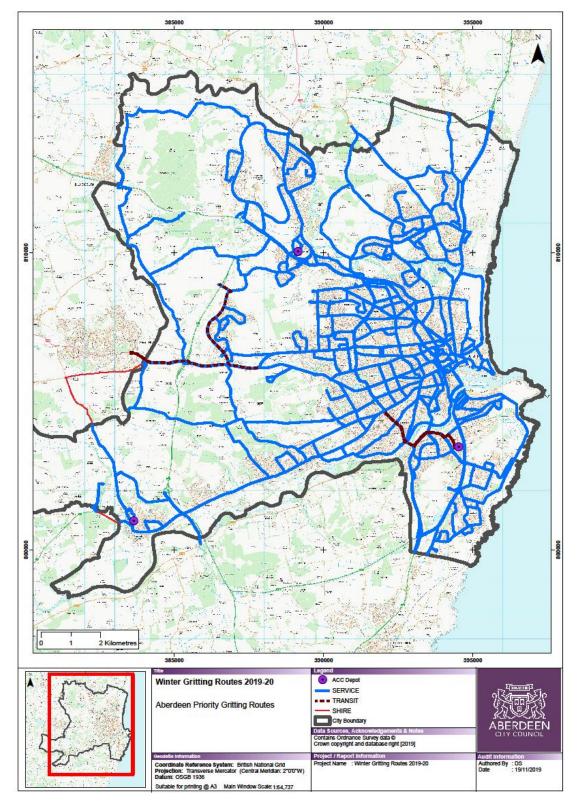
- 1. Duty period: Flexible.
- 2. Location: Office/Residence.
- 3. Communication: Telephone and radio
- 4. Responsible to Roads Infrastructure Manager, Operations, Roads.

#### 5. <u>Responsibilities</u>

- a) Wholly responsible for ensuring that the Superintendents and Operatives are conversant with Winter Maintenance Operations and shall provide the Superintendents with the physical resources to enable them to carry out the objectives and meet the standard set.
- b) Shall have the authority to utilise all the resources of his area, however, deployed on normal works, in the event of extreme conditions.
- c) During working hours, responsible for ensuring the Superintendents are advised of weather forecasts.
- d) Ensuring that stocks of sand and salt are maintained at a sufficient level during the operation period.
- e) Responsible for checking that all Winter Service equipment is overhauled and on station by the end of September each year and reporting omissions, if any.
- f) Responsible for preparing a duty rota for Superintendent and Operatives to ensure that adequate supervision for day to day operations is provided.
- g) Ensure compliance with the Specification Document.

#### OPERATIONAL PLAN APPENDIX C - GRITTING ROUTES

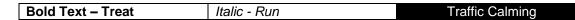
## **Priority Routes**

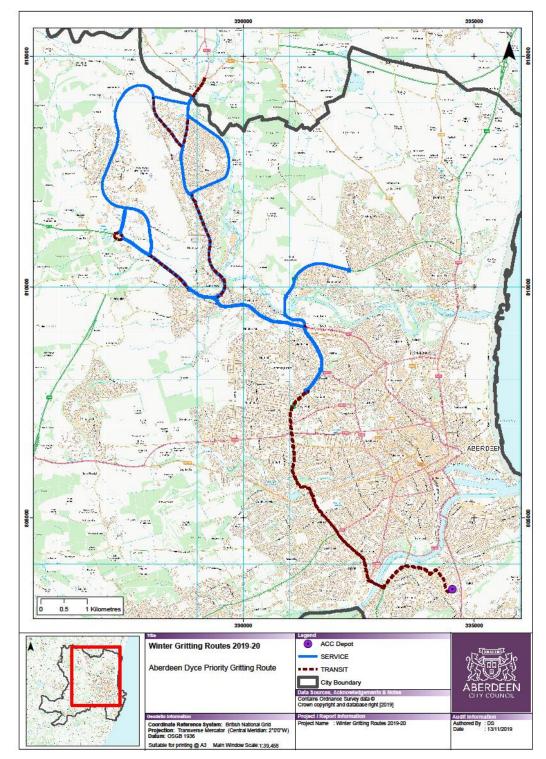


The following map shows the roads treated as either Priority1 Gold or Priority 1 Silver.

# (a) **Priority 1 Gold Routes**

The following routes (Gold 1-4) are to be treated 24 hours 7 days during the winter.

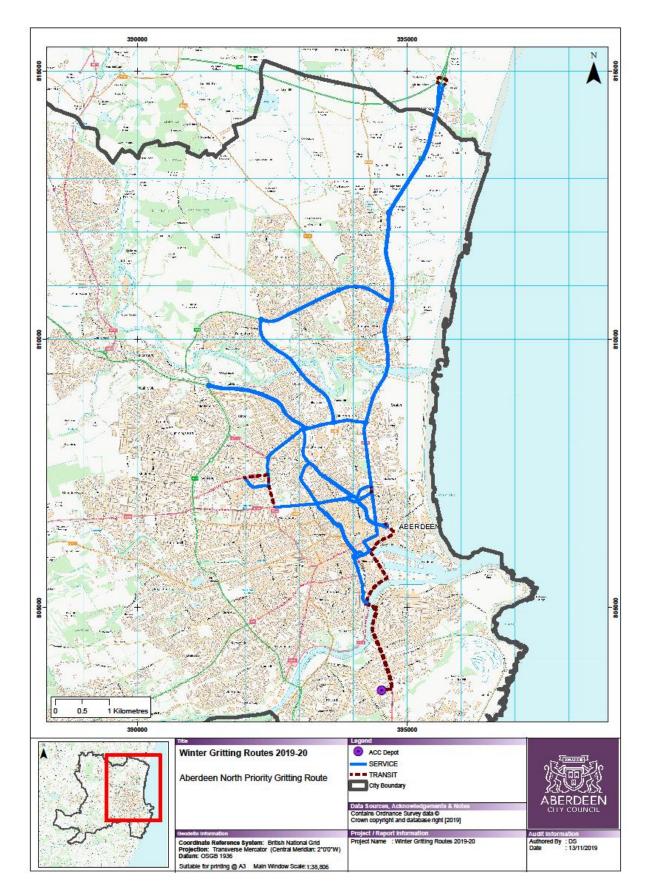




| GOLD ROUTE 1                        |                                     |                     |
|-------------------------------------|-------------------------------------|---------------------|
| STREET                              | то                                  | DIRECTION           |
| WEST TULLOS ROAD DEPOT              | CRAIGSHAW DRIVE                     | RIGHT               |
| CRAIGSHAW DRIVE                     | ABBOTSWELL ROAD                     | LEFT                |
| ABBOTSWELL ROAD                     | ABBOTSWELL ROUNDABOUT               | RIGHT - 2ND EXIT    |
| ABBOTSWELL ROUNDABOUT               | WEST TULLOS ROAD                    |                     |
| WEST TULLOS ROAD                    | KING GEORGE VI BRIDGE<br>ROUNDABOUT | STRAIGHT - 2ND EXIT |
| KING GEORGE VI BRIDGE<br>ROUNDABOUT | GREAT SOUTHERN ROAD                 |                     |
| GREAT SOUTHERN ROAD                 | BRIDGE OF DEE ROUNDABOUT            | RIGHT - 3RD EXIT    |
| BRIDGE OF DEE ROUNDABOUT            | STONEHAVEN ROAD                     |                     |
| STONEHAVEN ROAD                     | GARTHDEE ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| GARTHDEE ROUNDABOUT                 | SOUTH ANDERSON DRIVE                |                     |
| SOUTH ANDERSON DRIVE                | BROOMHILL ROUNDABOUT                | STRAIGHT - 2ND EXIT |
| BROOMHILL ROUNDABOUT                | SOUTH ANDERSON DRIVE                |                     |
| SOUTH ANDERSON DRIVE                | ANDERSON DRIVE                      | FOLLOW ON TO        |
| ANDERSON DRIVE                      | SEAFIELD ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| SEAFIELD ROUNDABOUT                 | ANDERSON DRIVE                      |                     |
| ANDERSON DRIVE                      | KEPPLESTONE ROUNDABOUT              | STRAIGHT - 2ND EXIT |
| KEPPLESTONE ROUNDABOUT              | ANDERSON DRIVE                      |                     |
| ANDERSON DRIVE                      | KINGSGATE ROUNDABOUT                | STRAIGHT - 2ND EXIT |
| KINGSGATE ROUNDABOUT                | NORTH ANDERSON DRIVE                |                     |
| NORTH ANDERSON DRIVE                | "MURDO'S ROUNDABOUT"                | COMPLETE - 2ND EXIT |
| "MURDO'S ROUNDABOUT"                | NORTH ANDERSON DRIVE                | COMPLETE - 2ND EXIT |
| NORTH ANDERSON DRIVE                | ROSEHILL ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| ROSEHILL ROUNDABOUT                 | NORTH ANDERSON DRIVE                |                     |
| NORTH ANDERSON DRIVE                | HAUDAGAIN ROUNDABOUT                | STRAIGHT - 2ND EXIT |
| HAUDAGAIN ROUNDABOUT                | MUGIEMOSS ROAD                      |                     |
| MUGIEMOSS ROAD                      | MUGIEMOSS ROUNDABOUT                | RIGHT - 2ND EXIT    |
| MUGIEMOSS ROUNDABOUT                | PARKWAY                             |                     |
| PARKWAY                             | "TESCO" ROUNDABOUT                  | STRAIGHT - 2ND EXIT |
| "TESCO" ROUNDABOUT                  | PARKWAY                             |                     |
| PARKWAY                             | DANESTONE ROUNDABOUT                | COMPLETE - 4TH EXIT |
| DANESTONE ROUNDABOUT                | PARKWAY                             |                     |
| PARKWAY                             | "TESCO" ROUNDABOUT                  | STRAIGHT - 2ND EXIT |
| "TESCO" ROUNDABOUT                  | PARKWAY                             | ·                   |
| PARKWAY                             | MUGIEMOSS ROUNDABOUT                | LEFT - 1ST EXIT     |

| MUGIEMOSS ROUNDABOUT | MUGIEMOSS ROAD       |                     |
|----------------------|----------------------|---------------------|
| MUGIEMOSS ROAD       | HAUDAGAIN ROUNDABOUT | RIGHT - 3RD EXIT    |
| HAUDAGAIN ROUNDABOUT | AUCHMILL ROAD        | -                   |
| AUCHMILL ROAD        | INVERURIE ROAD       | FOLLOW ON TO        |
| INVERURIE ROAD       | BUCKSBURN ROUNDABOUT | KEEP LEFT SLIP      |
| BUCKSBURN ROUNDABOUT | INVERURIE ROAD       | _                   |
| INVERURIE ROAD       | SCLATTIE ROUNDABOUT  | ROUND - 4TH EXIT    |
| SCLATTIE ROUNDABOUT  | INVERURIE ROAD       | ROUND - 4TH EXIT    |
| INVERURIE ROAD       | BUCKSBURN ROUNDABOUT | LEFT - 1ST EXIT     |
| BUCKSBURN ROUNDABOUT | NEW STONEYWOOD ROAD  | -                   |
| NEW STONEYWOOD ROAD  | STONEYWOOD ROAD      | FOLLOW ON TO        |
| STONEYWOOD ROAD      | "BP" ROUNDABOUT      | LEFT - 1ST EXIT     |
| "BP" ROUNDABOUT      | VICTORIA STREET      | -                   |
| VICTORIA STREET      | "KWIKFIT" ROUNDABOUT | LEFT - 1ST EXIT     |
| "KWIKFIT" ROUNDABOUT | OLD MELDRUM ROAD     | -                   |
| OLD MELDRUM ROAD     | DYCE DRIVE           | LEFT                |
| DYCE DRIVE           | PITMEDDEN ROAD       | LEFT                |
| PITMEDDEN ROAD       | VICTORIA STREET      | LEFT                |
| VICTORIA STREET      | "KWIKFIT" ROUNDABOUT | LEFT - 1ST EXIT     |
| "KWIKFIT" ROUNDABOUT | OLD MELDRUM ROAD     | -                   |
| OLD MELDRUM ROAD     | OLD MELDRUM ROAD     | FOLLOW ON TO        |
| OLD MELDRUM ROAD     | OLD MELDRUM ROAD     | TURN AT LIGHTS      |
| OLD MELDRUM ROAD     | "KWIKFIT" ROUNDABOUT | LEFT - 1ST EXIT     |
| "KWIKFIT" ROUNDABOUT | RIVERVIEW DRIVE      | -                   |
| RIVERVIEW DRIVE      | "BP" ROUNDABOUT      | LEFT - 1ST EXIT     |
| "BP" ROUNDABOUT      | STONEYWOOD ROAD      | -                   |
| STONEYWOOD ROAD      | NEW STONEYWOOD ROAD  | FOLLOW ON TO        |
| NEW STONEYWOOD ROAD  | BUCKSBURN ROUNDABOUT | ROUND - 2ND EXIT    |
| BUCKSBURN ROUNDABOUT | INVERURIE ROAD       | _                   |
| INVERURIE ROAD       | SCLATTIE ROUNDABOUT  | STRAIGHT - 2ND EXIT |
| SCLATTIE ROUNDABOUT  | INVERURIE ROAD       | STRAIGHT - 2ND EXIT |
| INVERURIE ROAD       | AIRPORT ROUNDABOUT   | ROUND - 4TH EXIT    |
| AIRPORT ROUNDABOUT   | INVERURIE ROAD       | ROUND - 4TH EXIT    |
| INVERURIE ROAD       | DYCE DRIVE           | LEFT                |
| DYCE DRIVE           | AGYLL ROAD           | LEFT                |
| AGYLL ROAD           | AIRPORT ROUNDABOUT   | ROUND - 4TH EXIT    |
| AIRPORT ROUNDABOUT   | AGYLL ROAD           | -                   |

| AGYLL ROAD                          | DYCE DRIVE                          | RIGHT               |
|-------------------------------------|-------------------------------------|---------------------|
| DYCE DRIVE                          | INVERURIE ROAD                      | LEFT                |
| INVERURIE ROAD                      | SCLATTIE ROUNDABOUT                 | ROUND - 4TH EXIT    |
| SCLATTIE ROUNDABOUT                 | INVERURIE ROAD                      | -                   |
| INVERURIE ROAD                      | DYCE DRIVE                          | RIGHT               |
| DYCE DRIVE                          | PITMEDDEN ROAD                      | FOLLOW ON TO        |
| PITMEDDEN ROAD                      | VICTORIA STREET                     | RIGHT               |
| VICTORIA STREET                     | "BP" ROUNDABOUT                     | STRAIGHT - 2ND EXIT |
| "BP" ROUNDABOUT                     | STONEYWOOD ROAD                     |                     |
| STONEYWOOD ROAD                     | NEW STONEYWOOD ROAD                 | FOLLOW ON TO        |
| NEW STONEYWOOD ROAD                 | BUCKSBURN ROUNDABOUT                | LEFT - 1ST EXIT     |
| BUCKSBURN ROUNDABOUT                | INVERURIE ROAD                      |                     |
| INVERURIE ROAD                      | AUCHMILL ROAD                       | LEFT - 1ST EXIT     |
| AUCHMILL ROAD                       | GREAT NORTHERN ROAD                 | FOLLOW ON TO        |
| GREAT NORTHERN ROAD                 | HAUDAGAIN ROUNDABOUT                | RIGHT - 3RD EXIT    |
| HAUDAGAIN ROUNDABOUT                | NORTH ANDERSON DRIVE                | RIGHT - 3RD EXIT    |
| NORTH ANDERSON DRIVE                | ROSEHILL ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| ROSEHILL ROUNDABOUT                 | NORTH ANDERSON DRIVE                |                     |
| NORTH ANDERSON DRIVE                | "MURDO'S ROUNDABOUT"                | STRAIGHT - 3RD EXIT |
| "MURDO'S ROUNDABOUT"                | NORTH ANDERSON DRIVE                | STRAIGHT - 3RD EXIT |
| NORTH ANDERSON DRIVE                | KINGS CROSS ROUNDABOUT              | STRAIGHT - 2ND EXIT |
| KINGS CROSS ROUNDABOUT              | ANDERSON DRIVE                      | STRAIGHT - 2ND EXIT |
| ANDERSON DRIVE                      | KEPPLESTONE ROUNDABOUT              | STRAIGHT - 2ND EXIT |
| KEPPLESTONE ROUNDABOUT              | ANDERSON DRIVE                      |                     |
| ANDERSON DRIVE                      | SEAFIELD ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| SEAFIELD ROUNDABOUT                 | ANDERSON DRIVE                      |                     |
| ANDERSON DRIVE                      | SOUTH ANDERSON DRIVE                | FOLLOW ON TO        |
| SOUTH ANDERSON DRIVE                | BROOMHILL ROUNDABOUT                | STRAIGHT - 2ND EXIT |
| BROOMHILL ROUNDABOUT                | SOUTH ANDERSON DRIVE                |                     |
| SOUTH ANDERSON DRIVE                | GARTHDEE ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| GARTHDEE ROUNDABOUT                 | STONEHAVEN ROAD                     |                     |
| STONEHAVEN ROAD                     | GREAT SOUTHERN ROAD                 | LEFT - 1ST EXIT     |
| GREAT SOUTHERN ROAD                 | KING GEORGE VI BRIDGE<br>ROUNDABOUT | STRAIGHT - 2ND EXIT |
| KING GEORGE VI BRIDGE<br>ROUNDABOUT | WEST TULLOS ROAD                    |                     |
| WEST TULLOS ROAD                    | ABBOTSWELL ROAD                     | LEFT - 1ST EXIT     |
| ABBOTSWELL ROAD                     | CRAIGSHAW DRIVE                     | RIGHT               |
| CRAIGSHAW DRIVE                     | WEST TULLOS ROADS DEPOT             | LEFT                |

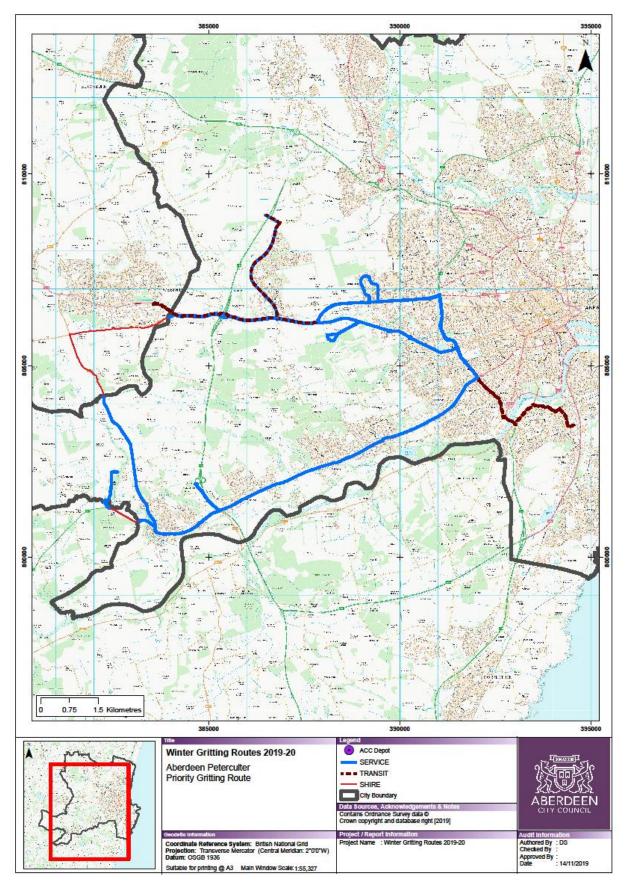


| GOLD ROUTE 2                  |                            |                        |
|-------------------------------|----------------------------|------------------------|
| STREET                        | то                         | DIRECTION              |
| WEST TULLOS DEPOT             | CRAIGSHAW DRIVE            | LEFT                   |
| CRAIGSHAW DRIVE               | WELLINGTON ROAD            | LEFT                   |
| WELLINGTON ROAD               | QUEEN ELIZABETH BRIDGE     | LEFT - 1ST EXIT        |
| QUEEN ELIZABETH BRIDGE        | NORTH ESPLANADE WEST       | RIGHT - 3RD EXIT       |
| NORTH ESPLANADE WEST          | MARKET STREET              | LEFT                   |
| MARKET STREET                 | MARKET STREET              | FOLLOW ON TO           |
| MARKET STREET                 | UNION STREET               | RIGHT                  |
| UNION STREET                  | CASTLE STREET              | FOLLOW ON TO           |
| CASTLE STREET                 | KING STREET                | LEFT                   |
| KING STREET                   | ELLON ROAD                 | FOLLOW ON TO           |
| ELLON ROAD                    | ELLON ROAD                 | CITY LIMIT             |
| ELLON ROAD                    | ELLON ROAD                 | LEFT - OFF SLIP ROAD   |
| ELLON ROAD                    | ELLON ROAD                 | ROUND - 5TH EXIT       |
| ELLON ROAD                    | ELLON ROAD                 | ON SLIP ROAD           |
| ELLON ROAD                    | MURCAR ROUNDBOUT           | STRAIGHT ON - 2ND EXIT |
| MURCAR ROUNDABOUT             | ELLON ROAD                 |                        |
| ELLON ROAD                    | AECC ROUNDABOUT            | RIGHT - 3RD EXIT       |
| AECC ROUNDABOUT               | PARKWAY                    |                        |
| PARKWAY                       | SCOTSTOWN ROUNDABOUT       | STRAIGHT ON - 2ND EXIT |
| SCOTSTOWN ROUNDABOUT          | PARKWAY                    | -                      |
| PARKWAY                       | DANESTONE ROUNDABOUT       | ROUND - 4TH EXIT       |
| STREET                        | то                         | DIRECTION              |
| DANESTONE ROUNDABOUT          | PARKWAY                    | ROUND - 4TH EXIT       |
| PARKWAY                       | SCOTSTOWN ROUNDABOUT       | STRAIGHT ON - 2ND EXIT |
| SCOTSTOWN ROUNDABOUT          | PARKWAY                    | STRAIGHT ON - 2ND EXIT |
| PARKWAY                       | AECC ROUNDABOUT            | RIGHT - 3RD EXIT       |
| AECC ROUNDABOUT               | KING STREET                | -                      |
| KING STREET                   | EAST NORTH STREET          | LEFT                   |
| EAST NORTH STREET             | BEACH BOULEVARD ROUNDABOUT | STRAIGHT ON - 3RD EXIT |
| BEACH BOULEVARD<br>ROUNDABOUT | COMMERCE STREET            | -                      |
| COMMERCE STREET               | VIRGINIA STREET            | RIGHT                  |
| VIRGINIA STREET               | GUILD STREET               | FOLLOW ON TO           |
| GUILD STREET                  | BRIDGE STREET              | RIGHT                  |

| BRIDGE STREET           | WAPPING STREET          | RIGHT                                   |
|-------------------------|-------------------------|---|
| WAPPING STREET          | DENBURN ROAD            | LEFT                                    |
| DENBURN ROAD            | WOOLMANHILL ROUNDABOUT  | STRAIGHT ON - 2ND EXIT                  |
| WOOLMANHILL ROUNDABOUT  | GILCOMSTON STEPS        | _                                       |
| GILCOMSTON STEPS        | SKENE SQUARE            | FOLLOW ON TO                            |
| SKENE SQUARE            | ROSEMOUNT ROUNDABOUT    | STRAIGHT ON - 2ND EXIT                  |
| ROSEMOUNT ROUNDABOUT    | SKENE SQUARE            |   |
| SKENE SQUARE            | CAROLINE PLACE          | FOLLOW ON TO                            |
| CAROLINE PLACE          | BERRYDEN ROAD           | STRAIGHT ON                             |
| BERRYDEN ROAD           | BERRYDEN ROOUNDABOUT    | STRAIGHT ON - 2ND EXIT                  |
| BERRYDEN ROOUNDABOUT    | BERRYDEN ROAD           | _                                       |
| BERRYDEN ROAD           | BELMONT ROAD            | FOLLOW ON TO                            |
| BELMONT ROAD            | POWIS TERRACE           | RIGHT                                   |
| POWIS TERRACE           | POWIS PLACE             | KEEP LEFT                               |
| POWIS PLACE             | CAUSEWAYEND             | FOLLOW ON TO                            |
| CAUSEWAYEND             | MOUNTHOOLY ROUNDABOUT   | STRAIGHT ON - 2ND EXIT                  |
| MOUNTHOOLY ROUNDABOUT   | NELSON STREET           | STRAIGHT ON - 2ND EXIT<br>THEN 1ST LEFT |
| NELSON STREET           | KING STREET             | LEFT                                    |
| KING STREET             | MOUNTHOOLY WAY          | LEFT                                    |
| MOUNTHOOLY WAY          | MOUNTHOOLY ROUNDABOUT   | FOLLOW ON TO                            |
| MOUNTHOOLY ROUNDABOUT   | WEST NORTH STREET       | LEFT - 1ST EXIT                         |
| WEST NORTH STREET       | EAST NORTH STRREET      | STRAIGHT ON                             |
| EAST NORTH STRREET      | JUSTICE PORT ROUNDABOUT | ROUND - 5TH EXIT                        |
| JUSTICE PORT ROUNDABOUT | EAST NORTH STRREET      |   |
| EAST NORTH STRREET      | WEST NORTH STREET       | STRAIGHT ON                             |
| WEST NORTH STREET       | MOUNTHOOLY ROUNDABOUT   | STRAIGHT ON - 3RD EXIT                  |
| MOUNTHOOLY ROUNDABOUT   | CAUSEWAYEND             | STRAIGHT ON - 3RD EXIT                  |
| CAUSEWAYEND             | POWIS PLACE             | FOLLOW ON TO                            |
| POWIS PLACE             | POWIS TERRACE           | STRAIGHT ON                             |
| POWIS TERRACE           | GREAT NORTHERN ROAD     | FOLLOW ON TO                            |
| GREAT NORTHERN ROAD     | ST MACHAR ROUNDABOUT    | STRAIGHT ON - 2ND EXIT                  |
| ST MACHAR ROUNDABOUT    | GREAT NORTHERN ROAD     |   |
| GREAT NORTHERN ROAD     | HAUDAGAIN ROUNDABOUT    | ROUND - 4TH EXIT                        |
| HAUDAGAIN ROUNDABOUT    | GREAT NORTHERN ROAD     |   |
| GREAT NORTHERN ROAD     | ST MACHAR ROUNDABOUT    | LEFT - 2ND EXIT                         |
| ST MACHAR ROUNDABOUT    | ST MACHAR DRIVE         |   |

| LEFT                   | TILLYDRONE AVENUE      | ST MACHAR DRIVE        |
|------------------------|------------------------|------------------------|
| FOLLOW ON TO           | GORDON MILLS ROAD      | TILLYDRONE AVENUE      |
| FOLLOW ON TO           | GORDON BRAE            | GORDON MILLS ROAD      |
| FOLLOW ON TO           | DANESTONE ROUNDABOUT   | GORDON BRAE            |
| ROUND - 4TH EXIT       | GORDON BRAE            | DANESTONE ROUNDABOUT   |
| FOLLOW ON TO           | GORDON MILLS ROAD      | GORDON BRAE            |
| FOLLOW ON TO           | TILLYDRONE AVENUE      | GORDON MILLS ROAD      |
| LEFT                   | ST MACHAR DRIVE        | TILLYDRONE AVENUE      |
| ROUND - 4TH EXIT       | SEATON ROUNDABOUT      | ST MACHAR DRIVE        |
|                        | ST MACHAR DRIVE        | SEATON ROUNDABOUT      |
| STRAIGHT ON - 2ND EXIT | ST MACHAR ROUNDABOUT   | ST MACHAR DRIVE        |
| STRAIGHT ON - 2ND EXIT | LESLIE ROAD            | ST MACHAR ROUNDABOUT   |
| STRAIGHT ON            | HILTON STREET          | LESLIE ROAD            |
| STRAIGHT ON - 2ND EXIT | SIX ROADS ROUNDABOUT   | HILTON STREET          |
|                        | WESTBURN DRIVE         | SIX ROADS ROUNDABOUT   |
| RIGHT                  | CORNHILL ROAD          | WESTBURN DRIVE         |
| RIGHT                  | ASHGROVE ROAD WEST     | CORNHILL ROAD          |
| RIGHT                  | WESTBURN DRIVE         | ASHGROVE ROAD WEST     |
| LEFT                   | WESTBURN ROAD          | WESTBURN DRIVE         |
| STRAIGHT ON            | HUTCHEON STREET        | WESTBURN ROAD          |
| ROUND - 5TH EXIT       | MOUNTHOOLY ROUNDABOUT  | HUTCHEON STREET        |
|                        | HUTCHEON STREET        | MOUNTHOOLY ROUNDABOUT  |
| LEFT                   | CAROLINE PLACE         | HUTCHEON STREET        |
| FOLLOW ON TO           | SKENE SQUARE           | CAROLINE PLACE         |
| STRAIGHT ON - 2ND EXIT | ROSEMOUNT ROUNDABOUT   | SKENE SQUARE           |
|                        | SKENE SQUARE           | ROSEMOUNT ROUNDABOUT   |
| FOLLOW ON TO           | GILCOMSTON STEPS       | SKENE SQUARE           |
| STRAIGHT ON - 2ND EXIT | WOOLMANHILL ROUNDABOUT | GILCOMSTON STEPS       |
| STRAIGHT ON - 2ND EXIT | DENBURN ROAD           | WOOLMANHILL ROUNDABOUT |

| DENBURN ROAD                         | WAPPING STREET                       | LEFT                   |
|--------------------------------------|--------------------------------------|------------------------|
| STREET                               | то                                   | DIRECTION              |
| WAPPING STREET                       | CARMELITE STREET                     | RIGHT                  |
| CARMELITE STREET                     | GUILD STREET                         | RIGHT                  |
| GUILD STREET                         | COLLEGE STREET                       | LEFT                   |
| COLLEGE STREET                       | SOUTH COLLEGE STREET                 | STRAIGHT ON TO         |
| SOUTH COLLEGE STREET                 | QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | STRAIGHT ON - 2ND EXIT |
| QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | QUEEN ELIZABETH BRIDGE               |                        |
| QUEEN ELIZABETH BRIDGE               | CRAIGINCHES ROUNDABOUT               | STRAIGHT - 3RD EXIT    |
| CRAIGINCHES ROUNDABOUT               | WELLINGTON ROAD                      |                        |
| WELLINGTON ROAD                      | CRAIGSHAW DRIVE                      | RIGHT                  |
| CRAIGSHAW DRIVE                      | WELLINGTON ROAD                      | RIGHT - DEPOT          |

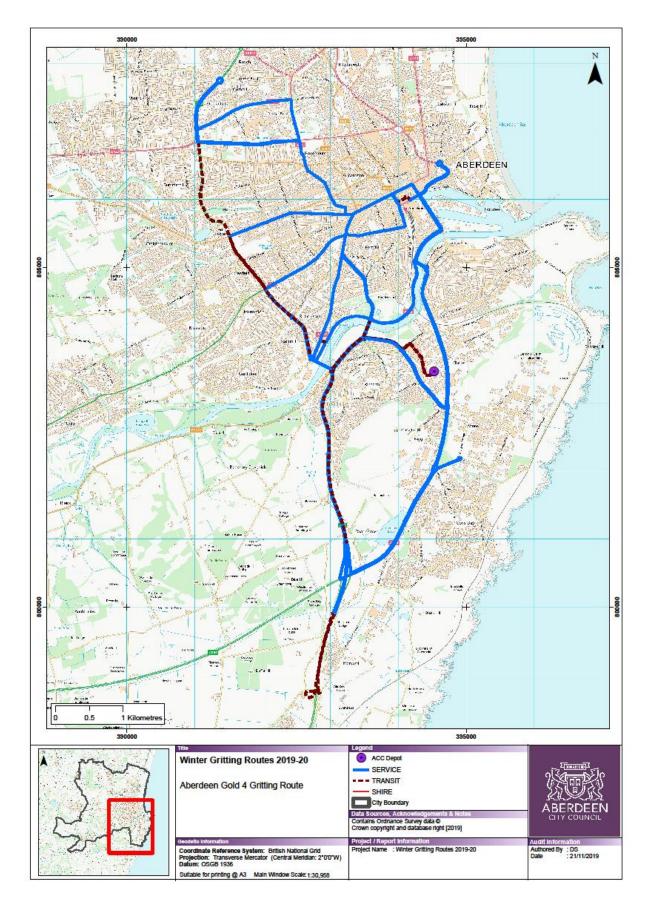


| GOLD ROUTE 3                        |                                     |                     |
|-------------------------------------|-------------------------------------|---------------------|
| STREET                              | то                                  | DIRECTION           |
| WEST TULLOS DEPOT                   | CRAIGSHAW DRIVE                     | RIGHT               |
| CRAIGSHAW DRIVE                     | ABBOTSWELL ROAD                     | LEFT                |
| ABBOTSWELL ROAD                     | ABBOTSWELL ROUNDABOUT               | RIGHT - 2ND EXIT    |
| ABBOTSWELL ROUNDABOUT               | WEST TULLOS ROAD                    | _                   |
| WEST TULLOS ROAD                    | KING GEORGE VI BRIDGE<br>ROUNDABOUT | STRAIGHT - 2ND EXIT |
| KING GEORGE VI BRIDGE<br>ROUNDABOUT | GREAT SOUTHERN ROAD                 | _                   |
| GREAT SOUTHERN ROAD                 | BRIDGE OF DEE ROUNDABOUT            | RIGHT - 3RD EXIT    |
| BRIDGE OF DEE ROUNDABOUT            | STONEHAVEN ROAD                     |                     |
| STONEHAVEN ROAD                     | GARTHDEE ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| GARTHDEE ROUNDABOUT                 | SOUTH ANDERSON DRIVE                |                     |
| SOUTH ANDERSON DRIVE                | BROOMHILL ROUNDABOUT                | STRAIGHT - 2ND EXIT |
| BROOMHILL ROUNDABOUT                | SOUTH ANDERSON DRIVE                |                     |
| SOUTH ANDERSON DRIVE                | ANDERSON DRIVE                      | FOLLOW ON TO        |
| ANDERSON DRIVE                      | SEAFIELD ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| SEAFIELD ROUNDABOUT                 | ANDERSON DRIVE                      |                     |
| ANDERSON DRIVE                      | KEPPLESTONE ROUNDABOUT              | STRAIGHT - 2ND EXIT |
| KEPPLESTONE ROUNDABOUT              | ANDERSON DRIVE                      | _                   |
| ANDERSON DRIVE                      | KINGSGATE                           | STRAIGHT - 2ND EXIT |
| KINGSGATE                           | NORTH ANDERSON DRIVE                |                     |
| NORTH ANDERSON DRIVE                | LANG STRACHT                        | LEFT                |
| LANG STRACHT                        | MIDDENCRAIG ROUNDABOUT              | ROUND - 3RD EXIT    |
| MIDDENCRAIG ROUNDABOUT              | LANG STRACHT                        |                     |
| LANG STRACHT                        | SKYE ROAD                           | LEFT                |
| SKYE ROAD                           | ARRAN AVENUE                        | LEFT                |
| ARRAN AVENUE                        | LEWIS ROAD                          | FOLLOW ON TO        |
| LEWIS ROAD                          | LANG STRACHT                        | LEFT                |
| LANG STRACHT                        | NORTH ANDERSON DRIVE                | RIGHT               |
| NORTH ANDERSON DRIVE                | KINGS CROSS ROUNDABOUT              | STRAIGHT - 2ND EXIT |
| KINGS CROSS ROUNDABOUT              | ANDERSON DRIVE                      |                     |

| ANDERSON DRIVE                         | KEPPLESTONE ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
|--|--|---------------------|
| KEPPLESTONE ROUNDABOUT                 | ANDERSON DRIVE                         |                     |
| ANDERSON DRIVE                         | SEAFIELD ROUNDABOUT                    | STRAIGHT - 2ND EXIT |
| SEAFIELD ROUNDABOUT                    | ANDERSON DRIVE                         |                     |
| ANDERSON DRIVE                         | GREAT WESTERN ROAD                     | RIGHT               |
| GREAT WESTERN ROAD                     | ST JOHNS TERRACE                       | FOLLOW ON TO        |
| ST JOHNS TERRACE                       | NORTH DEESIDE ROAD                     | FOLLOW ON TO        |
| NORTH DEESIDE ROAD                     | NORTH DEESIDE ROAD                     | TO CITY LIMIT       |
| NORTH DEESIDE ROAD                     | ANGUSTON ROAD                          | TURN RIGHT          |
| ANGUSTON ROAD                          | LINN MOOR ROAD                         | TURN RIGHT          |
| LINN MOOR ROAD                         | LINN MOOR ROAD                         | FOLLOW LEFT         |
| LINN MOOR ROAD                         | LINN MOOR SCHOOL                       | TURN AROUND         |
| LINN MOOR SCHOOL                       | LINN MOOR ROAD                         | TURN LEFT           |
| LINN MOOR ROAD                         | LINN MOOR ROAD                         | FOLLOW RIGHT        |
| LINN MOOR ROAD                         | ANGUSTON ROAD                          | TURN LEFT           |
| ANGUSTON ROAD                          | NORTH DEESIDE ROAD                     | TURN LEFT           |
| NORTH DEESIDE ROAD                     | NORTH DEESIDE ROAD                     | TO CITY LIMIT       |
| NORTH DEESIDE ROAD                     | AWPR                                   | LEFT                |
| AWPR                                   | AWPR                                   | ROUND - 3RD EXIT    |
| AWPR                                   | NORTH DEESIDE ROAD                     | RIGHT               |
| NORTH DEESIDE ROAD                     | MALCOLM ROAD                           | RIGHT               |
| MALCOLM ROAD                           | PETERCULTER - KIRKTON OF SKENE<br>ROAD | FOLLOW ON TO        |
| PETERCULTER - KIRKTON OF<br>SKENE ROAD | B979                                   | TO CITY LIMIT       |
| B979                                   | CARNIE ROUNDABOUT                      | ROUND - 3RD EXIT    |
| CARNIE ROUNDABOUT                      | B9119                                  |                     |
| B9119                                  | "TOTAL" ROUNDABOUT                     | STRAIGHT - 3RD EXIT |
| "TOTAL" ROUNDABOUT                     | B9119                                  |                     |
| B9119                                  | B9119 ROUNDABOUT 'TAQA'                | STRAIGHT - 2ND EXIT |
| B9119 ROUNDABOUT 'TAQA'                | B9119                                  |                     |
| B9119                                  | B9119 ROUNDABOUT AT PROSPECT<br>ROAD   | STRAIGHT - 2ND EXIT |
| B9119 ROUNDABOUT AT<br>PROSPECT ROAD   | B9119 TO CITY BOUNDARY                 |                     |
| B9119 TO CITY BOUNDARY                 | TARLAND ROAD                           | TO CITY LIMIT       |
| TARLAND ROAD                           | SKENE ROAD TO CITY BOUNDARY            | LEFT                |
| SKENE ROAD TO CITY<br>BOUNDARY         | A944                                   | FOLLOW ON TO        |

| A944                                   | A944 ROUNDABOUT AT WESTHILL<br>DRIVE   | ROUND - 4TH EXIT    |
|--|--|---------------------|
| A944 ROUNDABOUT AT<br>WESTHILL DRIVE   | A944 TO CITY BOUNDARY                  |                     |
| A944 TO CITY BOUNDARY                  | SKENE ROAD                             | FOLLOW ON TO        |
| SKENE ROAD                             | AWPR ROUNDABOUT                        | STRAIGHT - 3RD EXIT |
| AWPR ROUNDABOUT                        | SKENE ROAD                             |                     |
| SKENE ROAD                             | KINGSWELLS ROUNDABOUT                  | LEFT - 1ST EXIT     |
| KINGSWELLS ROUNDABOUT                  | CHAPEL OF STONEYWOOD - FAIRLEY<br>ROAD |                     |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | AWPR ROUNDABOUT                        | LEFT - 1ST EXIT     |
| AWPR ROUNDABOUT                        | AWPR ACCESS ROAD                       |                     |
| AWPR ACCESS ROAD                       | AWPR ACCESS ROAD                       | TURN                |
| AWPR ACCESS ROAD                       | AWPR ROUNDABOUT                        | RIGHT - 2ND EXIT    |
| AWPR ROUNDABOUT                        | CHAPEL OF STONEYWOOD - FAIRLEY<br>ROAD |                     |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | KINGSWELLS ROUNDABOUT                  | LEFT - 1ST EXIT     |
| KINGSWELLS ROUNDABOUT                  | SKENE ROAD                             | LEFT - 1ST EXIT     |
| SKENE ROAD                             | MIDDENCRAIG ROUNDABOUT                 | ROUND - 3RD EXIT    |
| MIDDENCRAIG ROUNDABOUT                 | SKENE ROAD                             |                     |
| SKENE ROAD                             | KINGSWELLS ROUNDABOUT                  | STRAIGHT - 2ND EXIT |
| KINGSWELLS ROUNDABOUT                  | SKENE ROAD                             |                     |
| SKENE ROAD                             | AWPR ROUNDABOUT                        | STRAIGHT - 2ND EXIT |
| AWPR ROUNDABOUT                        | SKENE ROAD                             |                     |
| SKENE ROAD                             | SKENE ROAD TO CITY BOUNDARY            | FOLLOW ON TO        |
| SKENE ROAD TO CITY BOUNDARY            | A944                                   | FOLLOW ON TO        |
| A944                                   | A944 ROUNDABOUT AT WESTHILL<br>DRIVE   | ROUND - 4TH EXIT    |
| A944 ROUNDABOUT AT<br>WESTHILL DRIVE   | A944 TO CITY BOUNDARY                  |                     |
| A944 TO CITY BOUNDARY                  | SKENE ROAD                             | FOLLOW ON TO        |
| SKENE ROAD                             | AWPR ROUNDABOUT                        | STRAIGHT - 3RD EXIT |
| AWPR ROUNDABOUT                        | SKENE ROAD                             |                     |
| SKENE ROAD                             | KINGSWELL ROUNDABOUT                   | STRAIGHT - 2ND EXIT |
| KINGSWELL ROUNDABOUT                   | SKENE ROAD                             |                     |
| SKENE ROAD                             | MIDDENCRAIG ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| MIDDENCRAIG ROUNDABOUT                 | SKENE ROAD                             |                     |
| SKENE ROAD                             | CREMATORIUM LOOP                       | RIGHT               |

| CREMATORIUM LOOP                    | SKENE ROAD                          | RIGHT               |
|-------------------------------------|-------------------------------------|---------------------|
| SKENE ROAD                          | QUEENS ROAD                         | FOLLOW ON TO        |
| QUEENS ROAD                         | PROVOST GRAHAM AVENUE BUS<br>LOOP   | RIGHT               |
| PROVOST GRAHAM AVENUE BUS<br>LOOP   | QUEENS ROAD                         | RIGHT               |
| QUEENS ROAD                         | HAZLEHEAD ROUNDABOUT                | COMPLETE - 2ND EXIT |
| HAZLEHEAD ROUNDABOUT                | QUEENS ROAD                         | _                   |
| QUEENS ROAD                         | KEPPLESTONE ROUNDABOUT              | RIGHT - 3RD EXIT    |
| KEPPLESTONE ROUNDABOUT              | ANDERSON DRIVE                      | RIGHT - 3RD EXIT    |
| ANDERSON DRIVE                      | SEAFIELD ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| SEAFIELD ROUNDABOUT                 | ANDERSON DRIVE                      | _                   |
| ANDERSON DRIVE                      | SOUTH ANDERSON DRIVE                | FOLLOW ON TO        |
| SOUTH ANDERSON DRIVE                | BROOMHILL ROUNDABOUT                | STRAIGHT - 2ND EXIT |
| BROOMHILL ROUNDABOUT                | SOUTH ANDERSON DRIVE                | -                   |
| SOUTH ANDERSON DRIVE                | GARTHDEE ROUNDABOUT                 | STRAIGHT - 2ND EXIT |
| GARTHDEE ROUNDABOUT                 | STONEHAVEN ROAD                     | STRAIGHT - 2ND EXIT |
| STONEHAVEN ROAD                     | GREAT SOUTHERN ROAD                 | LEFT - 1ST EXIT     |
| GREAT SOUTHERN ROAD                 | KING GEORVE VI BRIDGE<br>ROUNDABOUT | STRAIGHT - 2ND EXIT |
| KING GEORVE VI BRIDGE<br>ROUNDABOUT | WEST TULLOS ROAD                    | -                   |
| WEST TULLOS ROAD                    | ABBOTSWELL ROAD                     | LEFT - 1ST EXIT     |
| ABBOTSWELL ROAD                     | CRAIGSHAW DRIVE                     | RIGHT               |
| CRAIGSHAW DRIVE                     | WEST TULLOS DEPOT                   | LEFT                |



| GOLD ROUTE 4                         |                                      |                        |
|--------------------------------------|--------------------------------------|------------------------|
| STREET                               | то                                   | DIRECTION              |
| WEST TULLOS DEPOT                    | CRAIGSHAW DRIVE                      | RIGHT                  |
| CRAIGSHAW DRIVE                      | ABBOTSWELL ROAD                      | LEFT                   |
| ABBOTSWELL ROAD                      | ABBOTSWELL ROUNDABOUT                | LEFT - 1ST EXIT        |
| ABBOTSWELL ROUNDABOUT                | WEST TULLOS ROAD                     |                        |
| WEST TULLOS ROAD                     | NIGG ROUNDABOUT                      | LEFT - 1ST EXIT        |
| NIGG ROUNDABOUT                      | WELLINGTON ROAD                      |                        |
| WELLINGTON ROAD                      | CRAIGINCHES ROUNDABOUT               | LEFT - 1ST EXIT        |
| CRAIGINCHES ROUNDABOUT               | QUEEN ELIZABETH BRIDGE               |                        |
| QUEEN ELIZABETH BRIDGE               | QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | RIGHT - 3RD EXIT       |
| QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | NORTH ESPLANADE WEST                 |                        |
| NORTH ESPLANADE WEST                 | MARKET STREET                        | LEFT                   |
| MARKET STREET                        | UNION STREET                         | LEFT                   |
| UNION STREET                         | BRIDGE STREET                        | LEFT                   |
| BRIDGE STREET                        | WAPPING STREET                       | LEFT                   |
| WAPPING STREET                       | CARMELITE STREET                     | RIGHT                  |
| CARMELITE STREET                     | GUILD STREET                         | LEFT                   |
| GUILD STREET                         | TRINITY QUAY                         | STRAIGHT ON            |
| TRINITY QUAY                         | VIRGINIA STREET                      | STRAIGHT ON            |
| VIRGINIA STREET                      | COMMERCE STREET                      | LEFT                   |
| COMMERCE STREET                      | BEACH BOULEVARD                      | COMPLETE - 5TH EXIT    |
| BEACH BOULEVARD<br>ROUNDABOUT        | ROUNDABOUT<br>COMMERCE STREET        |                        |
| COMMERCE STREET                      | VIRGINIA STREET                      | RIGHT                  |
| VIRGINIA STREET                      | TRINITY QUAY                         | FOLLOW ON TO           |
| TRINITY QUAY                         | MARKET STREET                        | LEFT                   |
| MARKET STREET                        | NORTH ESPLANADE WEST                 | RIGHT                  |
| NORTH ESPLANADE WEST                 | QUEEN ELIZABETH BRIDGE               | LEFT - 1ST EXIT        |
| QUEEN ELIZABETH BRIDGE               | WELLINGTON ROAD                      | ROUND - 3RD EXIT       |
| WELLINGTON ROAD                      | NIGG ROUNDABOUT                      | STRAIGHT ON - 2ND EXIT |
| NIGG ROUNDABOUT                      | WELLINGTON ROAD                      |                        |
| WELLINGTON ROAD                      | ALTENS ROUNDABOUT                    | LEFT - 1ST EXIT        |
| ALTENS ROUNDABOUT                    | SOUTER HEAD ROAD                     |                        |
| SOUTER HEAD ROAD                     | ALTENS ROUNDABOUT                    | COMPLETE AND RETURN TO |
| ALTENS ROUNDABOUT                    | WELLINGTON ROAD                      | LEFT - 2ND EXIT        |

| WELLINGTON ROAD                                | STONEHAVEN ROAD - A92<br>NORTH                 | RIGHT   |
|--|--|---|
| STONEHAVEN ROAD - A92<br>NORTH                 | BRIDGE OF DEE ROUNDABOUT                       | STRAIGHT ON - 2ND EXIT                            |
| BRIDGE OF DEE<br>ROUNDABOUT                    | STONEHAVEN ROAD                                |   |
| STONEHAVEN ROAD                                | GARTHDEE ROUNDABOUT                            | COMPLETE - 4TH EXIT                               |
| GARTHDEE ROUNDABOUT                            | STONEHAVEN ROAD                                |   |
| STONEHAVEN ROAD                                | BRIDGE OF DEE ROUNDABOUT                       | STRAIGHT ON - 2ND EXIT                            |
| BRIDGE OF DEE<br>ROUNDABOUT                    | STONEHAVEN ROAD - A92 SOUTH                    |   |
| STONEHAVEN ROAD - A92<br>SOUTH                 | STONEHAVEN ROAD - A92 SOUTH                    | UNDER OVERPASS                                    |
| STONEHAVEN ROAD - A92<br>SOUTH                 | STONEHAVEN ROAD - MARYWELL<br>JUNCTION         | TAKE SLIP ROAD AND RETURN ON<br>NORTH CARRIAGEWAY |
| STONEHAVEN ROAD - A92<br>NORTH                 | BRIDGE OF DEE ROUNDABOUT                       | RIGHT LANE  |
| STONEHAVEN ROAD - A92<br>NORTH                 | BRIDGE OF DEE ROUNDABOUT                       | ROUND - 4TH EXIT                                  |
| BRIDGE OF DEE<br>ROUNDABOUT                    | STONEHAVEN ROAD - A92 SOUTH                    | ROUND - 4TH EXIT                                  |
| STONEHAVEN ROAD - A92<br>SOUTH                 | STONEHAVEN ROAD - A92 SOUTH<br>- OFF SLIP ROAD | LEAVE AT A92 SLIP ROAD                            |
| STONEHAVEN ROAD - A92<br>SOUTH - OFF SLIP ROAD | WELLINGTON ROAD                                | LEFT  |
| WELLINGTON ROAD                                | ALTENS ROUNDABOUT                              | STRAIGHT ON - 2ND EXIT                            |
| ALTENS ROUNDABOUT                              | WELLINGTON ROAD                                |   |
| WELLINGTON ROAD                                | NIGG ROUNDABOUT                                | LEFT - 1ST EXIT                                   |
| NIGG ROUNDABOUT                                | WEST TULLOS ROAD                               |   |
| WEST TULLOS ROAD                               | ABBOTSWELL ROUNDABOUT                          | STRAIGHT ON - 1ST EXIT                            |
| ABBOTSWELL ROUNDABOUT                          | WEST TULLOS ROAD                               |   |
| WEST TULLOS ROAD                               | KING GEORGE VI ROUNDABOUT                      | STRAIGHT ON - 2ND EXIT                            |
| KING GEORGE VI<br>ROUNDABOUT                   | GREAT SOUTHERN ROAD                            |   |
| GREAT SOUTHERN ROAD                            | BRIDGE OF DEE ROUNDABOUT                       | ROUND - 4TH EXIT                                  |
| BRIDGE OF DEE<br>ROUNDABOUT                    | GREAT SOUTHERN ROAD                            | ROUND - 4TH EXIT                                  |
| GREAT SOUTHERN ROAD                            | KING GEORGE VI BRIDGE<br>ROUNDABOUT            | LEFT - 1ST EXIT                                   |
| KING GEORGE VI BRIDGE<br>ROUNDABOUT            | KING GEORGE VI BRIDGE                          |   |
| KING GEORGE VI BRIDGE                          | DUTHIE PARK ROUNDABOUT                         | COMPLETE - 4TH EXIT                               |
| DUTHIE PARK ROUNDABOUT                         | KING GEORGE VI BRIDGE                          |   |
| KING GEORGE VI BRIDGE                          | KING GEORGE VI ROUNDABOUT                      | LEFT - 1ST EXIT                                   |

| KING GEORGE VI<br>ROUNDABOUT         | WEST TULLOS ROAD                     |                        |
|--------------------------------------|--------------------------------------|------------------------|
| WEST TULLOS ROAD                     | ABBOTSWELL ROUNDABOUT                | ROUND - 3RD EXIT       |
| ABBOTSWELL ROUNDABOUT                | WEST TULLOS ROAD                     |                        |
| WEST TULLOS ROAD                     | ABBOTSWELL ROUNDABOUT                | RIGHT - 3RD EXIT       |
| ABBOTSWELL ROUNDABOUT                | KING GEORGE VI BRIDGE                |                        |
| KING GEORGE VI BRIDGE                | DUTHIE PARK ROUNDABOUT               | STRAIGHT ON - 2ND EXIT |
| DUTHIE PARK ROUNDABOUT               | GREAT SOUTHERN ROAD                  |                        |
| GREAT SOUTHERN ROAD                  | WHINHILL ROUNDABOUT                  | LEFT - 1ST EXIT        |
| WHINHILL ROUNDABOUT                  | GREAT SOUTHERN ROAD                  |                        |
| GREAT SOUTHERN ROAD                  | HOLBURN ROUNDABOUT                   | COMPLETE - 4TH EXIT    |
| HOLBURN ROUNDABOUT                   | GREAT SOUTHERN ROAD                  |                        |
| GREAT SOUTHERN ROAD                  | WHINHILL ROUNDABOUT                  | RIGHT - 2ND EXIT       |
| WHINHILL ROUNDABOUT                  | GREAT SOUTHERN ROAD                  |                        |
| GREAT SOUTHERN ROAD                  | DUTHIE PARK ROUNDABOUT               | LEFT - 1ST EXIT        |
| DUTHIE PARK ROUNDABOUT               | RIVERSIDE DRIVE                      |                        |
| RIVERSIDE DRIVE                      | QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | ROUND - 4TH EXIT       |
| QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | RIVERSIDE DRIVE                      |                        |
| RIVERSIDE DRIVE                      | DUTHIE PARK ROUNDABOUT               | STRAIGHT ON - 2ND EXIT |
| DUTHIE PARK ROUNDABOUT               | RIVERSIDE DRIVE                      |                        |
| RIVERSIDE DRIVE                      | HOLBURN STREET                       | LEFT                   |
| HOLBURN STREET                       | GARTHDEE ROUNDABOUT                  | LEFT - 1ST EXIT        |
| GARTHDEE ROUNDABOUT                  | RIVERSIDE DRIVE                      | LEFT - 1ST EXIT        |
| RIVERSIDE DRIVE                      | RIVERSIDE DRIVE                      | LEFT                   |
| RIVERSIDE DRIVE                      | HOLBURN STREET                       | RIGHT                  |
| HOLBURN STREET                       | HOLBURN ROUNDABOUT                   | LEFT - 1ST EXIT        |
| HOLBURN ROUNDABOUT                   | HOLBURN STREET                       |                        |
| HOLBURN STREET                       | ALFORD PLACE                         | LEFT                   |
| ALFORD PLACE                         | ALBYN PLACE                          | FOLLOW ON TO           |
| ALBYN PLACE                          | QUEENS CROSS                         | STRAIGHT ON - 2ND EXIT |
| QUEENS CROSS                         | QUEENS ROAD                          |                        |
| QUEENS ROAD                          | QUEENS GATE                          | STRAIGHT ON - 2ND EXIT |
| QUEENS GATE                          | QUEENS ROAD                          |                        |
| QUEENS ROAD                          | KEPPLESTONE ROUNDABOUT               | LEFT - 1ST EXIT        |
| KEPPLESTONE<br>ROUNDABOUT            | ANDERSON DRIVE                       |                        |
| ANDERSON DRIVE                       | SEAFIELD ROUNDABOUT                  | STRAIGHT ON - 2ND EXIT |

| SEAFIELD ROUNDABOUT    | ANDERSON DRIVE         |                        |
|------------------------|------------------------|------------------------|
| ANDERSON DRIVE         | SOUTH ANDERSON DRIVE   | FOLLOW ON TO           |
| SOUTH ANDERSON DRIVE   | BROOMHILL ROUNDABOUT   | STRAIGHT ON - 2ND EXIT |
| BROOMHILL ROUNDABOUT   | SOUTH ANDERSON DRIVE   |                        |
| SOUTH ANDERSON DRIVE   | GARTHDEE ROUNDABOUT    | ROUND - 4TH EXIT       |
| GARTHDEE ROUNDABOUT    | SOUTH ANDERSON DRIVE   |                        |
| SOUTH ANDERSON DRIVE   | BROOMHILL ROUNDABOUT   | STRAIGHT ON - 2ND EXIT |
| BROOMHILL ROUNDABOUT   | SOUTH ANDERSON DRIVE   |                        |
| SOUTH ANDERSON DRIVE   | GREAT WESTERN ROAD A93 | RIGHT                  |
| GREAT WESTERN ROAD A93 | WILLOWBANK ROAD        | STRAIGHT ON            |
| WILLOWBANK ROAD        | SPRINGBANK TERRACE     | FOLLOW ON TO           |
| SPRINGBANK TERRACE     | WELLINGTON PLACE       | STRAIGHT ON            |
| WELLINGTON PLACE       | SOUTH COLLEGE STREET   | LEFT                   |
| SOUTH COLLEGE STREET   | COLLEGE STREET         | FOLLOW ON TO           |
| COLLEGE STREET         | BRIDGE STREET          | BEAR LEFT              |
| BRIDGE STREET          | UNION STREET           | LEFT                   |
| UNION STREET           | ALFORD PLACE           | BEAR RIGHT             |
| ALFORD PLACE           | VICTORIA STREET        | RIGHT                  |
| VICTORIA STREET        | WAVERLEY PLACE         | LEFT                   |
| WAVERLEY PLACE         | ALBERT STREET          | FOLLOW ON TO           |
| ALBERT STREET          | CRAIGIE LOANINGS       | STRAIGHT ON            |
| CRAIGIE LOANINGS       | WESTFIELD ROAD         | FOLLOW ON TO           |
| WESTFIELD ROAD         | ARGYLL PLACE           | STRAIGHT ON            |
| ARGYLL PLACE           | WESTBURN ROAD          | LEFT                   |
| WESTBURN ROAD          | NORTH ANDERSON DRIVE   | RIGHT                  |
| NORTH ANDERSON DRIVE   | "MURDO'S" ROUNDABOUT   | ROUND - 5TH EXIT       |
| "MURDO'S" ROUNDABOUT   | NORTH ANDERSON DRIVE   |                        |
| NORTH ANDERSON DRIVE   | WESTBURN ROAD          | LEFT                   |
| STREET                 | то                     | DIRECTION              |
| WESTBURN ROAD          | WESTBURN DRIVE         | LEFT                   |
| WESTBURN DRIVE         | ASHGROVE ROAD WEST     | LEFT                   |
| ASHGROVE ROAD WEST     | NORTH ANDERSON DRIVE   | LEFT                   |
| NORTH ANDERSON DRIVE   | KINGS CROSS            | STRAIGHT ON - 2ND EXIT |
| KINGS CROSS            | ANDERSON DRIVE         |                        |
| ANDERSON DRIVE         | KEPPLESTONE ROUNDABOUT | STRAIGHT ON - 2ND EXIT |
| KEPPLESTONE ROUNDABOUT | ANDERSON DRIVE         |                        |
| ANDERSON DRIVE         | SEAFIELD ROUNDABOUT    | STRAIGHT ON - 2ND EXIT |

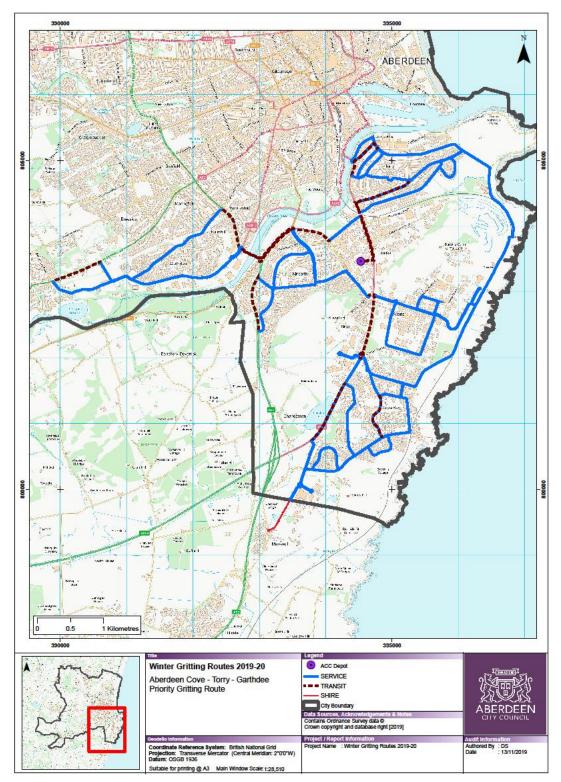
| SEAFIELD ROUNDABOUT          | ANDERSON DRIVE            |                        |
|------------------------------|---------------------------|------------------------|
| ANDERSON DRIVE               | SOUTH ANDERSON DRIVE      | FOLLOW ON TO           |
| SOUTH ANDERSON DRIVE         | BROOMHILL ROUNDABOUT      | STRAIGHT ON - 2ND EXIT |
| BROOMHILL ROUNDABOUT         | SOUTH ANDERSON DRIVE      | -                      |
| SOUTH ANDERSON DRIVE         | GARTHDEE ROUNDABOUT       | STRAIGHT ON - 2ND EXIT |
| GARTHDEE ROUNDABOUT          | STONEHAVEN ROAD           |                        |
| STONEHAVEN ROAD              | BRIDGE OF DEE ROUNDABOUT  | LEFT - 1ST EXIT        |
| BRIDGE OF DEE<br>ROUNDABOUT  | GREAT SOUTHERN ROAD       |                        |
| GREAT SOUTHERN ROAD          | KING GEORGE VI ROUNDABOUT | STRAIGHT ON - 2ND EXIT |
| KING GEORGE VI<br>ROUNDABOUT | WEST TULLOS ROAD          | _                      |
| WEST TULLOS ROAD             | ABBOTSWELL ROUNDABOUT     | LEFT - 1ST EXIT        |
| ABBOTSWELL ROUNDABOUT        | ABBOTSWELL ROAD           |                        |
| ABBOTSWELL ROAD              | CRAIGSHAW DRIVE           | RIGHT                  |
| CRAIGSHAW DRIVE              | WEST TULLOS DEPOT         | LEFT                   |
|                              | 1                         |                        |

# (b) **Priority 1, Silver routes**

The following described routes (numbered 5-10 ) cover Priority 1 Silver routes within the City and are to be treated between 04.45 and 21.00.

| Bold Text – Treat | Italic - Run | Traffic Calming |
|-------------------|--------------|-----------------|
|                   |              |                 |

# Silver route 5



| STREET                              | то                                  | DIRECTION              |  |
|-------------------------------------|-------------------------------------|------------------------|--|
| STREET                              | 10                                  | DIRECTION              |  |
| CRAIGSHAW DRIVE                     | WELLINGTON ROAD                     | LEF                    |  |
| WELLINGTON ROAD                     | ABBOTSWELL ROAD                     | LEF                    |  |
| ABBOTSWELL ROAD                     | ABBOTSWELL ROUNDABOUT               | RIGHT - 2NE<br>EXI     |  |
| ABBOTSWELL ROUNDABOUT               | WEST TULLOS ROAD                    | RIGHT - 2NL<br>EXI     |  |
| WEST TULLOS ROAD                    | KING GEORGE VI BRIDGE ROUNDABOUT    | STRAIGHT ON<br>2ND EXI |  |
| KING GEORGE VI BRIDGE ROUNDABOUT    | GREAT SOUTHERN ROAD                 |                        |  |
| GREAT SOUTHERN ROAD                 | BRIDGE OF DEE ROUNDABOUT            | RIGHT - 3RL<br>EXIT    |  |
| BRIDGE OF DEE ROUNDABOUT            | STONEHAVEN ROAD                     | -                      |  |
| STONEHAVEN ROAD                     | GARTHDEE ROUNDABOUT                 | LEFT - 1ST EXIT        |  |
| GARTHDEE ROUNDABOUT                 | GARTHDEE ROAD                       | _                      |  |
| GARTHDEE ROAD                       | ASDA ROUNDABOUT COM                 |                        |  |
| ASDA ROUNDABOUT                     | GARTHDEE ROAD                       | - 3RD EXI              |  |
| GARTHDEE ROAD                       | GARTHDEE ROUNDABOUT                 | LEFT - 1ST EXI         |  |
| GARTHDEE ROUNDABOUT                 | SOUTH ANDERSON DRIVE                | LEFT - 1ST EXI         |  |
| SOUTH ANDERSON DRIVE                | BROOMHILL ROUNDABOUT                | LEFT - 1ST EXI         |  |
| BROOMHILL ROUNDABOUT                | AUCHINYELL ROAD                     | -                      |  |
| AUCHINYELL ROAD                     | GARTHDEE ROAD                       | RIGH                   |  |
| GARTHDEE ROAD                       | PITFODELS STATION ROAD              | RIGH                   |  |
| PITFODELS STATION ROAD              | NORTH DEESIDE ROAD                  | LEF                    |  |
| NORTH DEESIDE ROAD                  | WESTERTON ROAD                      | LEF                    |  |
| WESTERTON ROAD                      | INCHGARTH ROAD                      | LEF                    |  |
| INCHGARTH ROAD                      | GARTHDEE ROAD                       | STRAIGHT OF            |  |
| GARTHDEE ROAD                       | SAINSBURYS ROUNDABOUT<br>ROUNDABOUT | COMPLETE<br>2ND EXI    |  |
| SAINSBURYS ROUNDABOUT<br>ROUNDABOUT | GARTHDEE ROAD                       | 1                      |  |
| GARTHDEE ROAD                       | ASDA ROUNDABOUT                     | STRAIGHT ON<br>2ND EXI |  |

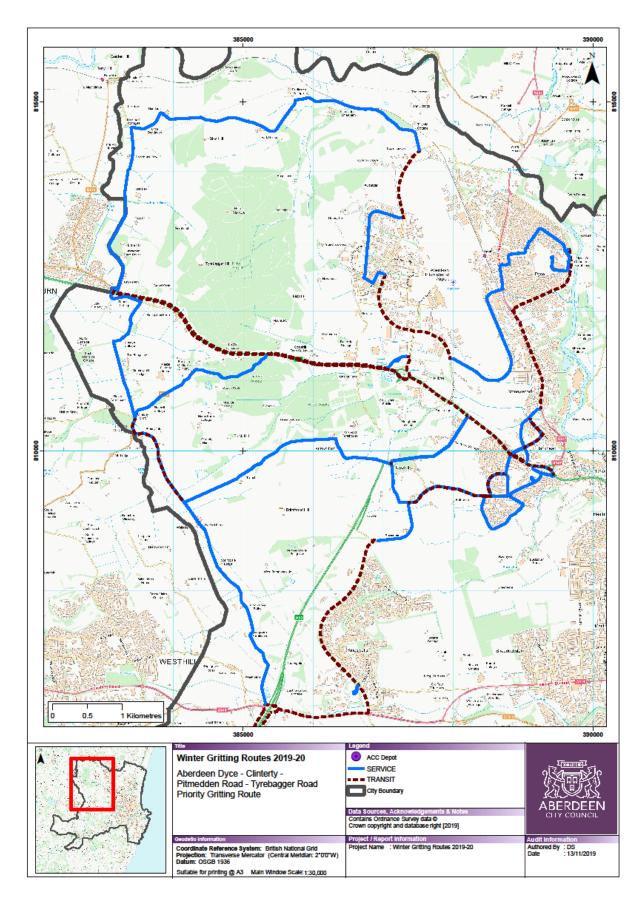
| ASDA ROUNDABOUT                  | GARTHDEE ROAD                    |                           |  |
|----------------------------------|----------------------------------|---------------------------|--|
| GARTHDEE ROAD                    | GARTHDEE ROUNDABOUT              | RIGHT - 3RD               |  |
| GARTHDEE ROUNDABOUT              | STONEHAVEN ROAD                  | EXIT                      |  |
| STONEHAVEN ROAD                  | BRIDGE OF DEE ROUNDABOUT         | LEFT 1ST EXIT             |  |
| BRIDGE OF DEE ROUNDABOUT         | GREAT SOUTHERN ROAD              |                           |  |
| GREAT SOUTHERN ROAD              | KING GEORGE VI BRIDGE ROUNDABOUT | RIGHT - 3RD<br>EXIT       |  |
| KING GEORGE VI BRIDGE ROUNDABOUT | PROVOST WATT DRIVE               |                           |  |
| PROVOST WATT DRIVE               | FAULDS GATE                      | RIGHT                     |  |
| FAULDS GATE                      | KINCORTH ROUNDABOUT              | RIGHT - 3RD               |  |
| KINCORTH ROUNDABOUT              | CAIRNGORM ROAD                   | EXIT                      |  |
| CAIRNGORM ROAD                   | STONEHAVEN ROAD                  | LEFT                      |  |
| STONEHAVEN ROAD                  | NIGG WAY                         | LEFT                      |  |
| NIGG WAY                         | GARDNER DRIVE                    | LEFT                      |  |
| GARDNER DRIVE                    | KINCORTH ROUNDABOUT              | RIGHT - 3RD<br>EXIT       |  |
| KINCORTH ROUNDABOUT              | CAIRNGORM DRIVE                  | RIGHT - 3RD<br>EXIT       |  |
| CAIRNGORM DRIVE                  | PROVOST WATT DRIVE               | LEFT                      |  |
| PROVOST WATT DRIVE               | KING GEORGE VI BRIDGE ROUNDABOUT | ROUND - 4TH<br>EXIT       |  |
| KING GEORGE VI BRIDGE ROUNDABOUT | PROVOST WATT DRIVE               | ROUND - 4TH<br>EXIT       |  |
| PROVOST WATT DRIVE               | ARBROATH WAY                     | LEFT                      |  |
| ARBROATH WAY                     | ABBOTSWELL CRESCENT              | RIGHT                     |  |
| ABBOTSWELL CRESCENT              | REDMOSS ROAD                     | LEFT                      |  |
| REDMOSS ROAD                     | WEST TULLOS ROAD                 | RIGHT                     |  |
| WEST TULLOS ROAD                 | NIGG ROUNDABOUT                  | STRAIGHT ON -<br>2ND EXIT |  |
| NIGG ROUNDABOUT                  | HARENESS ROAD                    |                           |  |
| HARENESS ROAD                    | CRAWPEEL ROUNDABOUT              | RIGHT - 3RD               |  |
| CRAWPEEL ROUNDABOUT              | CRAWPEEL ROAD                    | EXIT                      |  |
| CRAWPEEL ROAD                    | SOUTERHEAD ROUNDABOUT            | LEFT - 1ST EXIT           |  |

| SOUTERHEAD ROUNDABOUT                | SOUTERHEAD ROAD                   |                           |
|--------------------------------------|-----------------------------------|---------------------------|
| SOUTERHEAD ROAD                      | BLACKNESS ROAD                    | LEFT                      |
| BLACKNESS ROAD                       | HARENESS ROUNDABOUT               | STRAIGHT ON -<br>2ND EXIT |
| HARENESS ROUNDABOUT                  | MINTO ROAD                        |                           |
| MINTO ROAD                           | MINTO DRIVE                       | LEFT                      |
| MINTO DRIVE                          | MINTO AVENUE                      | LEFT                      |
| MINTO AVENUE                         | HARENESS ROAD                     | LEFT                      |
| STREET                               | то                                | DIRECTION                 |
| HARENESS ROAD                        | HARENESS ROUNDABOUT               | ROUND - 4TH               |
| HARENESS ROUNDABOUT                  | HARENESS ROAD                     | EXIT                      |
| HARENESS ROAD                        | CRAWPEEL ROUNDABOUT               | STRAIGHT ON -             |
| CRAWPEEL ROUNDABOUT                  | HARENESS ROAD                     | 2ND EXIT                  |
| HARENESS ROAD                        | NIGG ROUNDABOUT                   | LEFT - 1ST EXIT           |
| NIGG ROUNDABOUT                      | WELLINGTON ROAD                   | LEFT - 1ST EXIT           |
| WELLINGTON ROAD                      | ALTENS ROUNDABOUT                 | RIGHT - 4TH               |
| ALTENS ROUNDABOUT                    | WELLINGTON CIRCLE                 | EXIT                      |
| WELLINGTON CIRCLE                    | WELLINGTON CIRCLE                 | LEFT                      |
| WELLINGTON CIRCLE                    | WELLINGTON CIRCLE IKEA ROUNDABOUT | RIGHT - 4TH<br>EXIT       |
| WELLINGTON CIRCLE IKEA<br>ROUNDABOUT | WELLINGTON CIRCLE                 |                           |
| WELLINGTON CIRCLE                    | WELLINGTON CIRCLE                 | RIGHT                     |
| WELLINGTON CIRCLE                    | ALTENS ROUNDABOUT                 | RIGHT - 4TH               |
| ALTENS ROUNDABOUT                    | WELLINGTON ROAD                   | EXIT<br>RIGHT - 4TH       |
|                                      |                                   | EXIT                      |
| WELLINGTON ROAD                      | WELLINGTON ROAD                   | LEFT                      |
| WELLINGTON ROAD                      | COVE ROAD                         | LEFT                      |
| COVE ROAD                            | CHARLESTON DRIVE                  | LEFT                      |
| CHARLESTON DRIVE                     | COVE ROAD                         | LEFT                      |
| COVE ROAD                            | CHARLESTON ROAD                   | LEFT                      |
| CHARLESTON ROAD                      | CHARLESTON ROAD NORTH             | LEFT                      |
| CHARLESTON ROAD NORTH                | WELLINGTON ROAD                   | LEFT                      |
| WELLINGTON ROAD                      | WELLINGTON ROAD                   | LEFT                      |
| WELLINGTON ROAD                      | GATEWAY ROUNDABOUT                | LEFT 1ST EXIT             |
| GATEWAY ROUNDABOUT                   | GATEWAY DRIVE                     |                           |
| GATEWAY DRIVE                        | CHARLESTON MOSS ROUNDABOUT        | COMPLETE -<br>4TH EXIT    |

| CHARLESTON MOSS ROUNDABOUT | GATEWAY DRIVE       |                           |
|----------------------------|---------------------|---------------------------|
| GATEWAY DRIVE              | GATEWAY ROUNDABOUT  | LEFT - 1ST EXIT           |
| GATEWAY ROUNDABOUT         | WELLINGTON ROAD     |                           |
| WELLINGTON ROAD            | WELLINGTON ROAD     | CITY LIMIT                |
| WELLINGTON ROAD            | ROUNDABOUT          | ROUND 4TH                 |
| ROUNDABOUT                 | WELLINGTON ROAD     | EXIT                      |
| WELLINGTON ROAD            | WELLINGTON ROAD     | TO CITY LIMIT             |
| WELLINGTON ROAD            | GATEWAY ROUNDABOUT  | STRAIGHT ON -<br>1ST EXIT |
| GATEWAY ROUNDABOUT         | WELLINGTON ROAD     |                           |
| WELLINGTON ROAD            | COVE ROAD           | RIGHT                     |
| COVE ROAD                  | COVE CRESCENT       | RIGHT - 2ND               |
| COVE CRESCENT              | COVE ROAD           | ENTRANCE<br>RIGHT         |
| COVE ROAD                  | EARNS HEUGH ROAD    | LEFT                      |
| EARNS HEUGH ROAD           | LANGDYKES ROAD      | LEFT                      |
| LANGDYKES ROAD             | HYDROGEN STATION    | LEFT                      |
| HYDROGEN STATION           | LANGDYKES ROAD      | LEFT                      |
| LANGDYKES ROAD             | ALTENS ROUNDABOUT   | ROUND - 5TH<br>EXIT       |
| ALTENS ROUNDABOUT          | LANGDYKES ROAD      | ROUND - 5TH<br>EXIT       |
| LANGDYKES ROAD             | LORISTON ROAD       | RIGHT                     |
| LORISTON ROAD              | COVE ROAD           | RIGHT                     |
| COVE ROAD                  | EARNS HEUGH ROAD    | RIGHT                     |
| EARNS HEUGH ROAD           | LORISTON AVENUE     | RIGHT                     |
| LORISTON AVENUE            | LORISTON ROAD       | LEFT                      |
| LORISTON ROAD              | LANGDYKES ROAD      | RIGHT                     |
| LANGDYKES ROAD             | COAST ROAD          | LEFT                      |
| COAST ROAD                 | HARENESS ROAD       | LEFT                      |
| HARENESS ROAD              | HARENESS ROUNDABOUT | ROUND 4TH                 |
| HARENESS ROUNDABOUT        | HARENESS ROAD       | EXIT                      |
| HARENESS ROAD              | HARENESS PLACE      | LEFT                      |
| HARENESS PLACE             | TURN POINT          | ROUND                     |
| TURN POINT                 | HARENESS PLACE      | ROUND                     |
| HARENESS PLACE             | HARENESS ROAD       | LEFT                      |
| HARENESS ROAD              | COAST ROAD          | LEFT                      |
| COAST ROAD                 | ST FITTICKS ROAD    | LEFT                      |

| ST FITTICKS ROAD       | BALNAGASK ROAD         | LEFT                      |
|------------------------|------------------------|---------------------------|
| BALNAGASK ROAD         | WELLINGTON ROAD        | LEFT                      |
| WELLINGTON ROAD        | GIRDLENESS ROAD        | LEFT                      |
| GIRDLENESS ROAD        | BALNAGASK ROAD         | RIGHT                     |
| BALNAGASK ROAD         | BALNAGASK CIRCLE       | RIGHT                     |
| BALNAGASK CIRCLE       | GIRDLENESS ROAD        | RIGHT                     |
| GIRDLENESS ROAD        | BALNAGASK ROAD         | RIGHT                     |
| BALNAGASK ROAD         | ST FITTICKS ROAD       | LEFT                      |
| ST FITTICKS ROAD       | VICTORIA ROAD          | LEFT                      |
| VICTORIA ROAD          | MENZIES ROAD           | LEFT                      |
| STREET                 | то                     | DIRECTION                 |
| MENZIES ROAD           | CRAIG PLACE            | FOLLOW ON TO              |
| CRAIG PLACE            | CRAIGINCHES ROUNDABOUT | ROUND - 3RD               |
| CRAIGINCHES ROUNDABOUT | SOUTH ESPLANADE WEST   | EXIT                      |
| SOUTH ESPLANADE WEST   | VICTORIA ROAD          | RIGHT                     |
| VICTORIA ROAD          | GRAMPIAN ROAD          | RIGHT                     |
| GRAMPIAN ROAD          | GRAMPIAN PLACE         | RIGHT                     |
| GRAMPIAN PLACE         | WALKER ROAD            | RIGHT                     |
| WALKER ROAD            | VICTORIA ROAD          | LEFT                      |
| VICTORIA ROAD          | MENZIES ROAD           | LEFT                      |
| MENZIES ROAD           | CRAIG PLACE            | FOLLOW ON TO              |
| CRAIG PLACE            | CRAIGINCHES ROUNDABOUT | LEFT - 1ST EXIT           |
| CRAIGINCHES ROUNDABOUT | WELLINGTON ROAD        |                           |
| WELLINGTON ROAD        | GRAMPIAN PLACE         | LEFT                      |
| GRAMPIAN PLACE         | TULLOS CIRCLE          | RIGHT                     |
| TULLOS CIRCLE          | TULLOS PLACE           | STRAIGHT ON -<br>2ND EXIT |
| TULLOS PLACE           | ROUNDABOUT             | COMPLETE -                |
| ROUNDABOUT             | BALNAGASK ROAD         | 3RD EXIT                  |
| BALNAGASK ROAD         | WELINGTON ROAD         | LEFT                      |
| WELINGTON ROAD         | CRAIGSHAW DRIVE        | RIGHT                     |
| CRAIGSHAW DRIVE        | WEST TULLOS DEPOT      | RIGHT                     |

#### Silver route 6



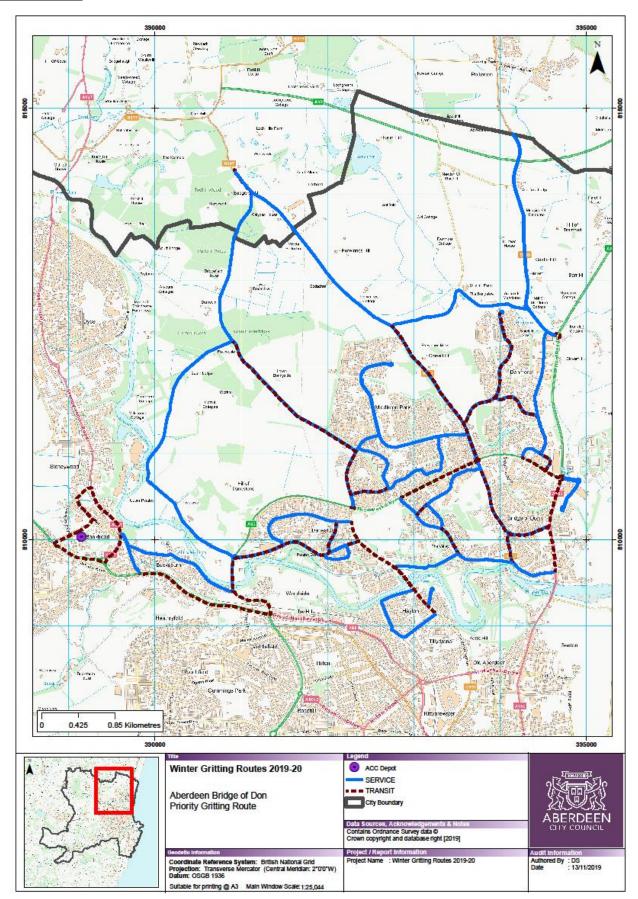
| SILVER ROUTE 6                         |  |                        |
|--|--|------------------------|
| STREET                                 | ТО                                     | DIRECTION              |
| WEST TULLOS DEPOT                      | CRAIGSHAW DRIVE                        | LEFT                   |
| CRAIGSHAW DRIVE                        | WELLINGTON ROAD                        | RIGHT                  |
| WELLINGTON ROAD                        | NIGG ROUNDABOUT                        | STRAIGHT ON - 2ND EXIT |
| NIGG ROUNDABOUT                        | WELLINGTON ROAD                        |                        |
| WELLINGTON ROAD                        | ALTENS ROUNDABOUT                      | STRAIGHT ON - 3RD EXIT |
| ALTENS ROUNDABOUT                      | WELLINGTON RDAD -                      |                        |
| WELLINGTON RDAD -                      | AWPR ROUNDABOUT                        | RIGHT - 2ND EXIT       |
| AWPR ROUNDABOUT                        | A90 NORTH                              |                        |
| A90 NORTH                              | AWPR ROUNDABOUT                        | LEFT A944 JUNCTION     |
| AWPR ROUNDABOUT                        | SKENE ROAD                             | RIGHT - 4TH EXIT       |
| SKENE ROAD                             | KINGSWELLS ROUNDABOUT                  | LEFT - 1ST EXIT        |
| KINGSWELLS ROUNDABOUT                  | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD |                        |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | KINGSWELLS P&R LOOP                    | LEFT                   |
| KINGSWELLS P&R LOOP                    | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | LEFT                   |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | AWPR ROUNDABOUT                        | STRAIGHT ON - 2ND EXIT |
| AWPR ROUNDABOUT                        | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | STRAIGHT ON - 2ST EXIT |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | NEWHILLS ROAD                          | RIGHT                  |
| NEWHILLS ROAD                          | KEPPLEHILLS ROAD                       | FOLLOW ON TO           |
| KEPPLEHILLS ROAD                       | NETHERHILLS AVENUE                     | RIGHT                  |
| NETHERHILLS AVENUE                     | NEWHILLS AVENUE                        | RIGHT                  |
| NEWHILLS AVENUE                        | KEPPLEHILLS ROAD                       | RIGHT                  |
| KEPPLEHILLS ROAD                       | SCLATTIE PARK                          | LEFT                   |
| SCLATTIE PARK                          | KEPPLEHILLS DRIVE                      | LEFT                   |
| KEPPLEHILLS DRIVE                      | KEPPLEHILLS ROAD                       | LEFT                   |
| KEPPLEHILLS ROAD                       | BUCKSBURN ACADEMY LOOP                 | LEFT                   |
| BUCKSBURN ACADEMY<br>LOOP              | KEPPLEHILLS ROAD                       | LEFT                   |
| KEPPLEHILLS ROAD                       | INVERURIE ROAD                         | RIGHT                  |
| INVERURIE ROAD                         | INVERURIE ROAD                         | LEFT                   |
| INVERURIE ROAD                         | BUCKSBURN ROUNDABOUT                   | LEFT                   |
| BUCKSBURN ROUNDABOUT                   | INVERURIE ROAD                         | KEEP LEFT              |

| INVERURIE ROAD                         | INVERURIE ROAD                         | LEFT                                    |
|--|--|---|
| INVERURIE ROAD                         | INVERURIE ROAD                         | LEFT                                    |
| INVERURIE ROAD                         | INVERURIE ROAD                         | KEEP LEFT                               |
| INVERURIE ROAD                         | SCLATTIE ROUNDABOUT                    | STRAIGHT ON - 2ND EXIT                  |
| SCLATTIE ROUNDABOUT                    | INVERURIE ROAD                         |   |
| INVERURIE ROAD                         | FORRIT BRAE                            | LEFT                                    |
| FORRIT BRAE                            | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | LEFT                                    |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | NEWHILLS ROAD                          | FOLLOW ON TO                            |
| NEWHILLS ROAD                          | KEPPLEHILLS DRIVE                      | LEFT                                    |
| KEPPLEHILLS DRIVE                      | SCLATTIE PARK                          | LEFT                                    |
| SCLATTIE PARK                          | SCLATTIE ROUNDABOUT                    | RIGHT - 3RD EXIT                        |
| SCLATTIE ROUNDABOUT                    | INVERURIE ROAD                         | RIGHT - 3RD EXIT                        |
| INVERURIE ROAD                         | GREENBURN DRIVE                        | LEFT                                    |
| GREENBURN DRIVE                        | BANKHEAD AVENUE                        | LEFT                                    |
| BANKHEAD AVENUE                        | SCLATTIE ROUNDABOUT                    | ROUND - 4TH EXIT                        |
| SCLATTIE ROUNDABOUT                    | BANKHEAD AVENUE                        | ROUND - 4TH EXIT                        |
| BANKHEAD AVENUE                        | BANKHEAD ROAD                          | LEFT                                    |
| BANKHEAD ROAD                          | GREENBURN DRIVE                        | LEFT                                    |
| GREENBURN DRIVE                        | BANKHEAD AVENUE                        | LEFT                                    |
| BANKHEAD AVENUE                        | BANKHEAD ROAD                          | LEFT                                    |
| BANKHEAD ROAD                          | STONEYWOOD ROAD                        | RIGHT                                   |
| STONEYWOOD ROAD                        | STONEYWOOD ROAD                        | LEFT                                    |
| STONEYWOOD ROAD                        | ROUNDABOUT                             | STRAIGHT ON - 1ST EXIT                  |
| ROUNDABOUT                             | STONEYWOOD ROAD                        |   |
| STONEYWOOD ROAD                        | "BP" ROUNDABOUT                        | RIGHT - 2ND EXIT                        |
| "BP" ROUNDABOUT                        | RIVERVIEW DRIVE                        |   |
| RIVERVIEW DRIVE                        | NETHERVIEW AVENUE                      | LEFT                                    |
| NETHERVIEW AVENUE                      | ROUNDABOUT                             | LEFT - 1ST EXIT                         |
| ROUNDABOUT                             | DYCE SHOPPING CENTRE LOOP              | LEFT - 1ST EXIT                         |
| DYCE SHOPPING CENTRE                   | ROUNDABOUT                             | FOLLOW LOOP TO ROUNDABOUT<br>AND RETURN |
| ROUNDABOUT                             | NETHERVIEW AVENUE                      | STRAIGHT ON - 2ND EXIT                  |
| NETHERVIEW AVENUE                      | GORDON TERRACE                         | STRAIGHT ON                             |
| GORDON TERRACE                         | NETHERVIEW ROAD                        | LEFT                                    |
| NETHERVIEW ROAD                        | GLEN ROAD                              | RIGHT                                   |
| GLEN ROAD                              | VICTORIA STREET                        | LEFT                                    |

| RIGHT                      | FARBURN TERRACE                        | VICTORIA STREET                        |
|----------------------------|--|--|
| LEFT - 1ST EXIT            | FARBURN ROUNDABOUT                     | FARBURN TERRACE                        |
|                            | WELLHEADS DRIVE                        | FARBURN ROUNDABOUT                     |
| RIGHT                      | DYCE DRIVE                             | WELLHEADS DRIVE                        |
| LEFT                       | HOWE MOSS ROAD                         | DYCE DRIVE                             |
| LEFT                       | HOWE MOSS DRIVE                        | HOWE MOSS ROAD                         |
| RIGHT                      | HOWE MOSS CRESCENT                     | HOWE MOSS DRIVE                        |
| RIGHT                      | HOWE MOSS AVENUE                       | HOWE MOSS CRESCENT                     |
| LEFT                       | DYCE DRIVE                             | HOWE MOSS AVENUE                       |
| LEFT                       | PITMEDDEN ROAD                         | DYCE DRIVE                             |
| LEFT                       | CASKIEBEN ROAD                         | PITMEDDEN ROAD                         |
| LEFT                       | MAIN ROAD                              | CASKIEBEN ROAD                         |
| LEFT - 1ST EXIT            | INVERURIE ROAD                         | MAIN ROAD                              |
| LEFT SLIP AT PARK AND RIDE | AIRPORT PARK & RIDE                    | INVERURIE ROAD                         |
| RIGHT                      | ARGYLL ROAD                            | AIRPORT PARK & RIDE                    |
| RIGHT - 3RD EXIT           | AIRPORT ROUNDABOUT                     | ARGYLL ROAD                            |
|                            | INVERURIE ROAD                         | AIRPORT ROUNDABOUT                     |
| LEFT - 1ST EXIT            | A96 ROUNDABOUT                         | INVERURIE ROAD                         |
|                            | CLINTERTY ROAD                         | A96 ROUNDABOUT                         |
| RIGHT                      | CLINTERTY ROAD                         | CLINTERTY ROAD                         |
| RIGHT                      | CLINTERTY - TYREBAGGER ROAD            | CLINTERTY ROAD                         |
| LEFT                       | BORROWSTONE ROAD                       | CLINTERTY - TYREBAGGER<br>ROAD         |
| LEFT                       | TULLUCH ROAD                           | BORROWSTONE ROAD                       |
| LEFT                       | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | TULLUCH ROAD                           |
| RIGHT                      | FORRIT BRAE                            | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD |
| LEFT                       | INVERURIE ROAD                         | FORRIT BRAE                            |
| STRAIGHT ON - 2ND EXIT     | AIRPORT ROUNDABOUT                     | INVERURIE ROAD                         |
|                            | INVERURIE ROAD                         | AIRPORT ROUNDABOUT                     |
| LEFT                       | CLINTERTY - TYREBAGGER ROAD            | INVERURIE ROAD                         |
| STRAIGHT ON                | CLINTERTY - TYREBAGGER ROAD            | CLINTERTY - TYREBAGGER<br>ROAD         |
| LEFT                       | BORROWSTONE ROAD                       | CLINTERTY - TYREBAGGER<br>ROAD         |
| STRAIGHT ON                | BORROWSTONE ROAD                       | BORROWSTONE ROAD                       |

| BORROWSTONE ROAD  | AWPR ROUNDABOUT   | LEFT - 2ND EXIT        |
|-------------------|-------------------|------------------------|
| AWPR ROUNDABOUT   | A90 SOUTH         | TO AWPR - 5TH EXIT     |
| A90 SOUTH         | AWPR ROUNDABOUT   | TO A956                |
| AWPR ROUNDABOUT   | WELLINGTON ROAD   | WELLINGTON ROAD        |
| WELLINGTON ROAD   | ALTENS ROUNDABOUT | STRAIGHT ON - 2ND EXIT |
| ALTENS ROUNDABOUT | WELLINGTON ROAD   | _                      |
| WELLINGTON ROAD   | NIGG ROUNDABOUT   | STRAIGHT ON - 2ND EXIT |
| NIGG ROUNDABOUT   | WELLINGTON ROAD   |                        |
| WELLINGTON ROAD   | CRAIGSHAW DRIVE   | LEFT                   |
| CRAIGSHAW DRIVE   | WEST TULLOS DEPOT | RIGHT                  |

#### Silver route 7



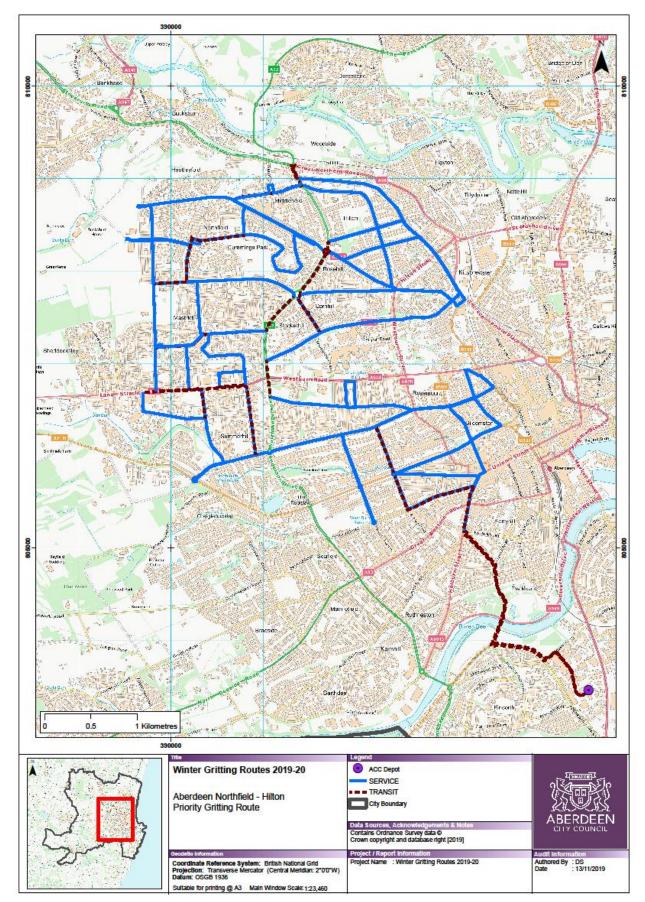
| SILVER ROUTE 7       |                      |                        |
|----------------------|----------------------|------------------------|
| STREET               | то                   | DIRECTION              |
| BUCKSBURN DEPOT      | BANKHEAD AVENUE      | RIGHT                  |
| BANKHEAD AVENUE      | BANKHEAD ROAD        | LEFT                   |
| BANKHEAD ROAD        | STONEYWOOD ROAD      | RIGHT                  |
| STONEYWOOD ROAD      | NEW STONEYWOOD ROAD  | RIGHT                  |
| NEW STONEYWOOD ROAD  | OLD MELDRUM ROAD     | LEFT                   |
| OLD MELDRUM ROAD     | MUGIEMOSS ROAD       | LEFT                   |
| MUGIEMOSS ROAD       | MUGIEMOSS ROUNDABOUT | LEFT - 1ST EXIT        |
| MUGIEMOSS ROUNDABOUT | PARKWAY              | LEFT - 1ST EXIT        |
| PARKWAY              | "TESCO" ROUNDABOUT   | RIGHT - 3RD EXIT       |
| "TESCO" ROUNDABOUT   | LAUREL DRIVE         |                        |
| LAUREL DRIVE         | FAIRVIEW STREET      | LEFT                   |
| FAIRVIEW STREET      | FAIRVIEW BRAE        | RIGHT                  |
| FAIRVIEW BRAE        | LAUREL DRIVE         | RIGHT                  |
| LAUREL DRIVE         | LAUREL PLACE         | LEFT                   |
| LAUREL PLACE         | LAUREL DRIVE         | LEFT                   |
| LAUREL DRIVE         | FAIRVIEW BRAE        | RIGHT                  |
| FAIRVIEW BRAE        | FAIRVIEW STREET      | RIGHT                  |
| FAIRVIEW STREET      | GORDON BRAE          | RIGHT                  |
| GORDON BRAE          | LAUREL DRIVE         | RIGHT                  |
| LAUREL DRIVE         | "TESCO" ROUNDABOUT   | STRAIGHT ON - 2ND EXIT |
| "TESCO" ROUNDABOUT   | UPPER PERSLEY ROAD   |                        |
| UPPER PERSLEY ROAD   | WHITESTRIPES ROAD    | RIGHT                  |
| WHITESTRIPES ROAD    | WHITESTRIPES AVENUE  | LEFT                   |
| WHITESTRIPES AVENUE  | JESMOND AVENUE NORTH | RIGHT                  |
| JESMOND AVENUE NORTH | VALENTINE ROAD       | RIGHT                  |
| VALENTINE ROAD       | WHITESTRIPES AVENUE  | LEFT                   |
| WHITESTRIPES AVENUE  | DANESTONE ROUNDABOUT | ROUND - 4TH EXIT       |
| DANESTONE ROUNDABOUT | WHITESTRIPES AVENUE  | ROUND - 4TH EXIT       |
| WHITESTRIPES AVENUE  | JESMOND DRIVE        | LEFT                   |
| JESMOND DRIVE        | JESMOND DRIVE        | TO BUS TURN POINT      |
| JESMOND DRIVE        | JESMOND DRIVE        | INTO BUS TURN POINT    |
| JESMOND DRIVE        | JESMOND DRIVE        | LEFT                   |
| JESMOND DRIVE        | SCOTSTOWN ROAD       | RIGHT                  |
| SCOTSTOWN ROAD       | SCOTSTOWN ROUNDABOUT | ROUND - 4TH EXIT       |

| SCOTSTOWN ROUNDABOUT          | SCOTSTOWN ROAD             | ROUND - 4TH EXIT                   |
|-------------------------------|----------------------------|------------------------------------|
| SCOTSTOWN ROAD                | JESMOND DRIVE              | LEFT                               |
| JESMOND DRIVE                 | JESMOND AVENUE             | LEFT                               |
| JESMOND AVENUE                | VALENTINE ROAD             | FOLLOW ON TO                       |
| VALENTINE ROAD                | WHITESTRIPES AVENUE        | RIGHT                              |
| WHITESTRIPES AVENUE           | WHITESTRIPES ROAD          | LEFT                               |
| WHITESTRIPES ROAD             | WHITESTRIPES ROAD          | FOLLOW ON TO                       |
| WHITESTRIPES ROAD             | SCOTSTOWN ROAD             | LEFT                               |
| SCOTSTOWN ROAD                | TURN POINT                 | RIGHT TO TURN IN QUARRY<br>OPENING |
| TURN POINT                    | SCOTSTOWN ROAD             | LEFT                               |
| SCOTSTOWN ROAD                | DUBFORD ROAD               | LEFT                               |
| DUBFORD ROAD                  | SHIELHILL AVENUE           | FOLLOW ON TO                       |
| SHIELHILL AVENUE              | SHIELHILL AVENUE           | TO BUS TURN                        |
| SHIELHILL AVENUE              | DUBFORD ROAD               | FOLLOW ON TO                       |
| DUBFORD ROAD                  | GREENBRAE DRIVE            | LEFT                               |
| STREET                        | то                         | DIRECTION                          |
| GREENBRAE DRIVE               | DENMORE ROAD               | RIGHT                              |
| DENMORE ROAD                  | WOODSIDE ROAD              | RIGHT                              |
| WOODSIDE ROAD                 | THE PARKWAY                | LEFT                               |
| THE PARKWAY                   | WOODSIDE ROAD              | LEFT                               |
| WOODSIDE ROAD                 | DENMORE ROAD               | RIGHT                              |
| DENMORE ROAD                  | GREENBRAE DRIVE            | LEFT                               |
| GREENBRAE DRIVE               | DUBFORD ROAD               | LEFT                               |
| DUBFORD ROAD                  | SCOTSTOWN ROAD             | LEFT                               |
| SCOTSTOWN ROAD                | SCOTSTOWN ROUNDABOUT       | STRAIGHT ON - 2ND EXIT             |
| SCOTSTOWN ROUNDABOUT          | SCOTSTOWN ROAD             | STRAIGHT ON - 2ND EXIT             |
| SCOTSTOWN ROAD                | NORTH DONSIDE ROAD         | FOLLOW ON TO                       |
| NORTH DONSIDE ROAD            | GORDON BARRACKS ROUNDABOUT | LEFT - 1ST EXIT                    |
| GORDON BARRACKS<br>ROUNDABOUT | ELLON ROAD                 | LEFT - 1ST EXIT                    |
| ELLON ROAD                    | AECC ROUNDABOUT            | RIGHT - 3RD EXIT                   |
| AECC ROUNDABOUT               | PARKWAY EAST               |                                    |
| PARKWAY EAST                  | TECHNOLOGY PARK ROUNDABOUT | RIGHT - 3RD EXIT                   |
| TECHNOLOGY PARK<br>ROUNDABOUT | AECC P & R LOOP            | RIGHT - 3RD EXIT                   |

| AECC P & R LOOP               | TECHNOLOGY PARK ROUNDABOUT | LEFT - 1ST EXIT        |
|-------------------------------|----------------------------|------------------------|
| TECHNOLOGY PARK<br>ROUNDABOUT | PARKWAY EAST               | LEFT - 1ST EXIT        |
| PARKWAY EAST                  | AECC ROUNDABOUT            | STRAIGHT ON - 2ND EXIT |
| AECC ROUNDABOUT               | THE PARKWAY                | STRAIGHT ON - 2ND EXIT |
| THE PARKWAY                   | WOODSIDE ROAD              | RIGHT                  |
| WOODSIDE ROAD                 | DENMORE ROAD               | RIGHT                  |
| DENMORE ROAD                  | B999                       | RIGHT                  |
| B999                          | MURCAR ROUNDABOUT          | ROUND - 4TH EXIT       |
| MURCAR ROUNDABOUT             | B999                       | ROUND - 4TH EXIT       |
| B999                          | B999                       | TURN AT "TATTIE SHEDS" |
| B999                          | SHIELHILL ROAD             | RIGHT                  |
| SHIELHILL ROAD                | SHIELHILL ROUNDABOUT       | LEFT                   |
| SHIELHILL ROUNDABOUT          | SHIELHILL ROAD             |                        |
| SHIELHILL ROAD                | SCOTSTOWN ROAD             | LEFT                   |
| SCOTSTOWN ROAD                | SCOTSTOWN ROUNDABOUT       | STRAIGHT ON - 2ND EXIT |
| SCOTSTOWN ROUNDABOUT          | SCOTSTOWN ROAD             |                        |
| SCOTSTOWN ROAD                | SCOTSTOWN ROAD             | RIGHT                  |
| SCOTSTOWN ROAD                | BALGOWNIE ROAD             | FOLLOW ON TO           |
| BALGOWNIE ROAD                | ELLON ROAD                 | LEFT                   |
| ELLON ROAD                    | BALGOWNIE ROAD             | LEFT - 1ST EXIT        |
| BALGOWNIE ROAD                | SCOTSTOWN ROAD             | LEFT                   |
| SCOTSTOWN ROAD                | BALGOWNIE ROAD             | RIGHT                  |
| BALGOWNIE ROAD                | BRAEHEAD WAY               | RIGHT                  |
| BRAEHEAD WAY                  | SCOTSTOWN ROAD             | LEFT                   |
| SCOTSTOWN ROAD                | SCOTSTOWN ROUNDABOUT       | LEFT - 1ST EXIT        |
| SCOTSTOWN ROUNDABOUT          | THE PARKWAY                | LEFT - 1ST EXIT        |
| THE PARKWAY                   | BALGOWNIE ROAD             | LEFT                   |
| BALGOWNIE ROAD                | BRAEHEAD WAY               | LEFT                   |
| BRAEHEAD WAY                  | BODACRA ROAD               | RIGHT                  |
| BODACRA ROAD                  | BALGOWNIE ROAD             | LEFT                   |
| BALGOWNIE ROAD                | BALGOWNIE DRIVE            | RIGHT                  |
| BALGOWNIE DRIVE               | GRANDHOME DRIVE            | LEFT                   |
| GRANDHOME DRIVE               | GORDON BRAE                | LEFT                   |
| GORDON BRAE                   | PAPERMILL DRIVE BUS LOOP   | LEFT                   |

| LEFT             | GORDON MILLS ROAD    | PAPERMILL DRIVE BUS LOOP |
|------------------|----------------------|--------------------------|
| RIGH1            | HAYTON ROAD          | GORDON MILLS ROAD        |
| RIGHT            | DONBANK TERRACE      | HAYTON ROAD              |
| RIGHT            | GORDON MILLS ROAD    | DONBANK TERRACE          |
| LEFT             | GORDON MILLS ROAD    | GORDON MILLS ROAD        |
| LEFT             | LAUREL DRIVE         | GORDON MILLS ROAD        |
| LEFT - 1ST EXIT  | "TESCO" ROUNDABOUT   | LAUREL DRIVE             |
|                  | THE PARKWAY          | "TESCO" ROUNDABOUT       |
| LEFT - 1ST EXIT  | MUGIEMOSS ROUNDABOUT | THE PARKWAY              |
|                  | MUGIEMOSS ROAD       | MUGIEMOSS ROUNDABOUT     |
| RIGHT - 3RD EXIT | HAUDAGAIN ROUNDABOUT | MUGIEMOSS ROAD           |
| RIGHT - 3RD EXIT | AUCHMILL ROAD        | HAUDAGAIN ROUNDABOUT     |
| RIGHT            | OLD MELDRUM ROAD     | AUCHMILL ROAD            |
| LEFT             | NEW STONEYWOOD ROAD  | OLD MELDRUM ROAD         |
| RIGHT - 2ND EXIT | BUCKSBURN ROUNDABOUT | NEW STONEYWOOD ROAD      |
| RIGHT - 2ND EXIT | INVERURIE ROAD       | BUCKSBURN ROUNDABOUT     |
| RIGHT - 3RD EXIT | SCLATTIE ROUNDABOUT  | INVERURIE ROAD           |
|                  | BANKHEAD AVENUE      | SCLATTIE ROUNDABOUT      |
| RIGH1            | BUCKSBURN DEPOT      | BANKHEAD AVENUE          |

### Silver route 8



| SILVER ROUTE 8        |                            |                           |
|-----------------------|----------------------------|---------------------------|
|                       | то                         | DIRECTION                 |
| ULLOS DEPOT           | CRAIGSHAW DRIVE            | RIGHT                     |
| HAW DRIVE             | ABBOTSWELL ROAD            | LEFT                      |
| SWELL ROAD            | ABBOTSWELL ROAD ROUNDABOUT | RIGHT - 2ND EXIT          |
| SWELL ROAD ROUNDABOUT | WEST TULLOS ROAD           | _                         |
| ULLOS ROAD            | KING GEORGE VI ROUNDABOUT  | RIGHT- 3RD EXIT           |
| EORGE VI ROUNDABOUT   | GREAT SOUTHERN ROAD        | _                         |
| SOUTHERN ROAD         | DUTHIE PARK ROUNDABOUT     | STRAIGHT ON - 2ND EXIT    |
| PARK ROUNDABOUT       | GREAT SOUTHERN ROAD        |                           |
| SOUTHERN ROAD         | WHINHILL ROUNDABOUT        | LEFT - 1ST EXIT           |
| ILL ROUNDABOUT        | GREAT SOUTHERN ROAD        |                           |
| SOUTHERN ROAD         | HOLBURN ROUNDABOUT         | RIGHT - 2ND EXIT          |
| RN ROUNDABOUT         | HOLBURN STREET             |                           |
| RN STREET             | UNION GROVE                | LEFT                      |
| GROVE                 | ST SWITHIN STREET          | RIGHT                     |
| THIN STREET           | QUEENS CROSS               | STRAIGHT ON - 2ND EXIT    |
| S CROSS               | FOUNTAINHALL ROAD          | STRAIGHT ON - 2ND<br>EXIT |
| AINHALL ROAD          | KINGS GATE                 | LEFT                      |
| GATE                  | FOREST ROAD                | LEFT                      |
| ROAD                  | QUEENS GATE                | STRAIGHT ON 2ND EXIT      |
| S GATE                | FOREST AVENUE              |                           |
| AVENUE                | RENDEZVOUS ROUNDABOUT      | COMPLETE - 4TH EXIT       |
| ZVOUS ROUNDABOUT      | FOREST AVENUE              | -                         |
| AVENUE                | QUEENS GATE                | STRAIGHT ON 2ND EXIT      |

| QUEENS GATE             | FOREST ROAD             |                      |
|-------------------------|-------------------------|----------------------|
| FOREST ROAD             | KINGS GATE              | LEFT                 |
| KINGS GATE              | KINGS CROSS             | STRAIGHT ON 2ND EXIT |
| KINGS CROSS             | KINGS GATE              |                      |
| KINGS GATE              | SUMMERHILL ROAD         | RIGHT                |
| SUMMERHILL ROAD         | MASTRICK DRIVE          | STRAIGHT ON          |
| MASTRICK DRIVE          | WHITEMYRES AVENUE       | LEFT                 |
| WHITEMYRES AVENUE       | WHITEMYRES PLACE        | LEFT                 |
| WHITEMYRES PLACE        | LANG STRACHT            | LEFT                 |
| LANG STRACHT            | MASTRICK DRIVE          | LEFT                 |
| MASTRICK DRIVE          | ARNAGE DRIVE            | RIGHT                |
| ARNAGE DRIVE            | NEWPARK PLACE           | LEFT                 |
| NEWPARK PLACE           | MASTRICK ROAD           | LEFT                 |
| MASTRICK ROAD           | GREENFERN ROAD          | FOLLOW ON TO         |
| GREENFERN ROAD          | FERNHILL DRIVE          | LEFT                 |
| FERNHILL DRIVE          | LANG STRACHT            | LEFT                 |
| LANG STRACHT            | STRONSAY DRIVE          | RIGHT                |
| STRONSAY DRIVE          | KINGS GATE              | RIGHT                |
| KINGS GATE              | HAZELHEAD ROUNDABOUT    | COMPLETE - 4TH EXIT  |
| HAZELHEAD ROUNDABOUT    | KINGS GATE              |                      |
| KINGS GATE              | SUMERHILL ROAD          | LEFT                 |
| SUMERHILL ROAD          | LANG STRACHT            | LEFT                 |
| LANG STRACHT            | ROUSAY DRIVE            | LEFT                 |
| ROUSAY DRIVE            | EDAY ROAD               | LEFT                 |
| EDAY ROAD               | STRONSAY DRIVE          | LEFT                 |
| STRONSAY DRIVE          | LANG STRACHT            | LEFT                 |
| LANG STRACHT            | SPRINGHILL ROAD         | RIGHT                |
| SPRINGHILL ROAD         | GREENFERN ROAD          | RIGHT                |
| GREENFERN ROAD          | GREENFERN ROAD BUS LOOP | 2ND ENTRY - LEFT     |
| GREENFERN ROAD BUS LOOP | GREENFERN ROAD          | LEFT                 |
| GREENFERN ROAD          | UPPER MASTRICK WAY      | LEFT                 |
| UPPER MASTRICK WAY      | PROVOST FRASER DRIVE    | LEFT                 |
| PROVOST FRASER DRIVE    | SPRINGHILL ROAD         | LEFT                 |
| SPRINGHILL ROAD         | GREENFERN ROAD          | LEFT                 |

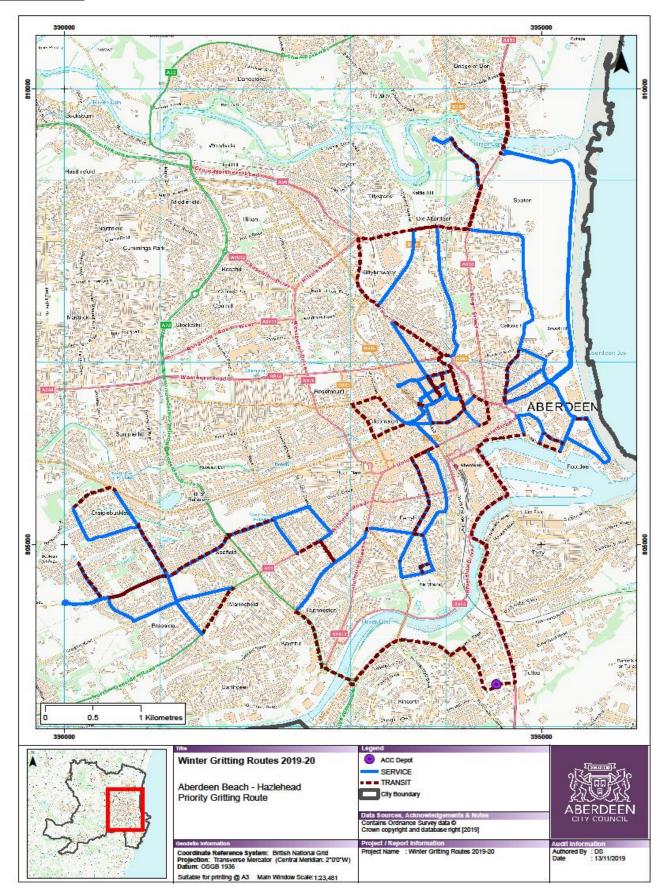
| GREENFERN ROAD         | MASTRICK ROAD               | FOLLOW ON TO                     |
|------------------------|-----------------------------|----------------------------------|
| MASTRICK ROAD          | NORTH ANDERSON DRIVE        | LEFT                             |
| NORTH ANDERSON DRIVE   | CAIRNCRY ROUNDABOUT         | LEFT - 1ST EXIT                  |
| CAIRNCRY ROUNDABOUT    | PROVOST FRASER DRIVE        | LEFT - 1ST EXIT                  |
| PROVOST FRASER DRIVE   | BYRON AVENUE                | RIGHT                            |
| STREET                 | то                          | DIRECTION                        |
| BYRON AVENUE           | BYRON SQUARE                | RIGHT                            |
| BYRON SQUARE           | BYRON SQUARE                | RIGHT                            |
| BYRON SQUARE           | BYRON AVENUE                | LEFT                             |
| BYRON AVENUE           | BREBNER TERRACE             | RIGHT                            |
| BREBNER TERRACE        | DAVIDSON GARDENS            | STRAIGHT                         |
| DAVIDSON GARDENS       | HOWES ROAD                  | STRAIGHT                         |
| HOWES ROAD             | HOWES ROAD BUS LOOP         | LEFT                             |
| HOWES ROAD BUS LOOP    | HOWES ROAD                  | RIGHT                            |
| HOWES ROAD             | DAVIDSON GARDENS            | STRAIGHT                         |
| DAVIDSON GARDENS       | BREBNER TERRACE             | STRAIGHT                         |
| BREBNER TERRACE        | BYRON AVENUE                | LEFT                             |
| BYRON AVENUE           | BYRON SQUARE                | RIGHT                            |
| BYRON SQUARE           | QUARRY ROAD                 | FOLLOW ON TO                     |
| QUARRY ROAD            | CUMMINGS PARK CRESCENT      | MINI ROUNDABOUT -<br>STRAIGHT ON |
| CUMMINGS PARK CRESCENT | CUMMINGS PARK CRESCENT      | STRAIGHT ON                      |
| CUMMINGS PARK CRESCENT | CUMMINGS PARK CIRCLE        | RIGHT                            |
| CUMMINGS PARK CIRCLE   | MOIR CRESCENT               | LEFT                             |
| MOIR CRESCENT          | PROVOST RUST DRIVE          | RIGHT                            |
| PROVOST RUST DRIVE     | PROVOST RUST DRIVE          | LEFT                             |
| PROVOST RUST DRIVE     | GRANITEHILL ROAD            | LEFT                             |
| GRANITEHILL ROAD       | QUARRY ROAD                 | RIGHT                            |
| QUARRY ROAD            | BYRON SQUARE                | FOLLOW ON TO                     |
| BYRON SQUARE           | BYRON AVENUE                | LEFT                             |
| BYRON AVENUE           | PROVOST FRASER DRIVE        | RIGHT                            |
| PROVOST FRASER DRIVE   | SPRINGHILL ROAD             | RIGHT                            |
| SPRINGHILL ROAD        | PROVOST RUST DRIVE          | LEFT                             |
| PROVOST RUST DRIVE     | PROVOST RUST DRIVE BUS LOOP | ROUND BUS LOOP                   |

| PROVOST RUST DRIVE BUS LOOP | PROVOST RUST DRIVE   |                           |
|-----------------------------|----------------------|---------------------------|
| PROVOST RUST DRIVE          | MANOR AVENUE         | LEFT                      |
| MANOR AVENUE                | LOGIE TERRACE        | LEFT                      |
| LOGIE TERRACE               | LOGIE PLACE          | RIGHT                     |
| LOGIE PLACE                 | MANOR TERRACE        | RIGHT                     |
| MANOR AVENUE                | NORTH ANDERSON DRIVE | LEFT                      |
| NORTH ANDERSON DRIVE        | HOUDAGAIN ROUNDABOUT | ROUND - 4TH EXIT          |
| HOUDAGAIN ROUNDABOUT        | NORTH ANDERSON DRIVE |                           |
| NORTH ANDERSON DRIVE        | CLIFTON ROAD         | LEFT                      |
| CLIFTON ROAD                | HILTON ROAD          | RIGHT                     |
| HILTON ROAD                 | NORTH ANDERSON DRIVE | LEFT                      |
| NORTH ANDERSON DRIVE        | ROSEHILL ROUNDABOUT  | RIGHT - 3RD EXIT          |
| ROSEHILL ROUNDABOUT         | PROVOST RUST DRIVE   |                           |
| PROVOST RUST DRIVE          | MANOR AVENUE         | RIGHT                     |
| MANNOR TERRACE              | MANOR AVENUE         | LEFT                      |
| MANOR AVENUE                | HILTON DRIVE         | STRAIGHT ON - BUS<br>GATE |
| HILTON DRIVE                | SIX ROADS ROUNDABOUT | STRAIGHT ON - 2ND<br>EXIT |
| SIX ROADS ROUNDABOUT        | BACK HILTON ROAD     | STRAIGHT ON - 2ND<br>EXIT |
| BACK HILTON ROAD            | BERRYDEN ROAD        | FOLLOW ON TO              |
| BERRYDEN ROAD               | BELMONT ROAD         | LEFT                      |
| BELMONT ROAD                | POWIS TERRACE        | LEFT                      |
| POWIS TERRACE               | CLIFTON ROAD         | KEEP LEFT                 |
| CLIFTON ROAD                | HILTON ROAD          | LEFT                      |
| HILTON ROAD                 | NORTH ANDERSON DRIVE | LEFT                      |
| NORTH ANDERSON DRIVE        | ROSEHILL ROUNDABOUT  | STRAIGHT ON - 2ND EXIT    |
| ROSEHILL ROUNDABOUT         | NORTH ANDERSON DRIVE |                           |
| NORTH ANDERSON DRIVE        | MURDO'S ROUNDABOUT   | STRAIGHT ON - 2ND EXIT    |
| MURDO'S ROUNDABOUT          | FORESTERHILL ROAD    |                           |
| FORESTERHILL ROAD           | CORNHILL ROUNDABOUT  | STRAIGHT ON - 2ND         |
| CORNHILL ROUNDABOUT         | FORESTERHILL ROAD    | EXIT                      |
| FORESTERHILL ROAD           | ASHGROVE ROAD WEST   | LEFT                      |
| ASHGROVE ROAD WEST          | ASHGROVE ROAD        | STRAIGHT ON               |
| ASHGROVE ROAD               | POWIS TERRACE        | LEFT                      |

| POWIS TERRACE        | CLIFTON ROAD         | KEEP LEFT                 |
|----------------------|----------------------|---------------------------|
| CLIFTON ROAD         | HILTON AVENUE        | LEFT                      |
| HILTON AVENUE        | ROSEHILL DRIVE       | RIGHT                     |
| ROSEHILL DRIVE       | ROSEHILL ROUNDABOUT  | ROUND - 4TH EXIT          |
| ROSEHILL ROUNDABOUT  | ROSEHILL DRIVE       | ROUND 4TH EXIT            |
| ROSEHILL DRIVE       | SIX ROADS ROUNDABOUT | RIGHT TO<br>ROUNDABOUT    |
| SIX ROADS ROUNDABOUT | CAIRNCRY ROAD        | RIGHT - 4TH EXIT          |
| CAIRNCRY ROAD        | MURDO'S ROUNDABOUT   | LEFT - 1ST EXIT           |
| MURDO'S ROUNDABOUT   | FORESTERHILL ROAD    | LEFT - 1ST EXIT           |
| FORESTERHILL ROAD    | CORNHILL ROUNDABOUT  | STRAIGHT ON - 2ND         |
| CORNHILL ROUNDABOUT  | FORESTERHILL ROAD    | EXIT                      |
| FORESTERHILL ROAD    | ASHGROVE ROAD WEST   | RIGHT                     |
| ASHGROVE ROAD WEST   | NORTH ANDERSON DRIVE | LEFT                      |
| NORTH ANDERSON DRIVE | MIDSTOCKET ROAD      | LEFT                      |
| MIDSTOCKET ROAD      | CAMPERDOWN ROAD      | LEFT                      |
| CAMPERDOWN ROAD      | WESTBURN ROAD        | LEFT                      |
| WESTBURN ROAD        | HARCOURT ROAD        | LEFT                      |
| HARCOURT ROAD        | MIDSTOCKET ROAD      | LEFT                      |
| MIDSTOCKET ROAD      | ROSEMOUNT PLACE      | LEFT                      |
| ROSEMOUNT PLACE      | ROSEMOUNT ROUNDABOUT | LEFT - 1ST EXIT           |
| ROSEMOUNT ROUNDABOUT | SKENE SQUARE         |                           |
| SKENE SQUARE         | ROSEMOUNT TERRACE    | LEFT                      |
| ROSEMOUNT TERRACE    | WESTBURN ROAD        | LEFT                      |
| WESTBURN ROAD        | MOUNT STREET         | LEFT                      |
| MOUNT STREET         | ROSEMOUNT PLACE      | RIGHT                     |
| ROSEMOUNT PLACE      | ESSLEMONT AVENUE     | LEFT                      |
| ESSLEMONT AVENUE     | SKENE STREET         | LEFT                      |
| SKENE STREET         | ROSEMOUNT VIADUCT    | LEFT                      |
| ROSEMOUNT VIADUCT    | SOUTH MOUNT STREET   | FOLLOW ON TO              |
| SOUTH MOUNT STREET   | ROSEMOUNT PLACE      | LEFT                      |
| ROSEMOUNT PLACE      | BEECHGROVE TERRACE   | STRAIGHT ON               |
| BEECHGROVE TERRACE   | FOUNTAINHALL ROAD    | LEFT                      |
| FOUNTAINHALL ROAD    | QUEENS CROSS         | STRAIGHT ON - 2ND<br>EXIT |
| QUEENS CROSS         | ST SWITHIN STREET    |                           |
| ST SWITHIN STREET    | UNION GROVE          | LEFT                      |

| UNION GROVE               | HOLBURN STREET            | LEFT                |
|---------------------------|---------------------------|---------------------|
| HOLBURN STREET            | UNION STREET              | RIGHT               |
| UNION STREET              | ROSE STREET               | LEFT                |
| ROSE STREET               | SKENE STREET              | LEFT                |
| SKENE STREET              | CARDEN PLACE              | FOLLOW ON TO        |
| CARDEN PLACE              | ALBYN PLACE               | LEFT                |
| ALBYN PLACE               | ALFORD PLACE              | FOLLOW ON TO        |
| ALFORD PLACE              | HOLBURN STREET            | RIGHT               |
| HOLBURN STREET            | HOLBURN ROUNDABOUT        | STRAIGHT - 2ND EXIT |
| HOLBURN ROUNDABOUT        | GREAT SOUTHERN ROAD       | STRAIGHT - 2ND EXIT |
| GREAT SOUTHERN ROAD       | WHINHILL ROUNDABOUT       | RIGHT - 2ND EXIT    |
| WHINHILL ROUNDABOUT       | GREAT SOUTHERN ROAD       |                     |
| GREAT SOUTHERN ROAD       | DUTHIE PARK ROUNDABOUT    | STRAIGHT - 2ND EXIT |
| DUTHIE PARK ROUNDABOUT    | GREAT SOUTHERN ROAD       |                     |
| GREAT SOUTHERN ROAD       | KING GEORGE VI ROUNDABOUT | LEFT - 1ST EXIT     |
| KING GEORGE VI ROUNDABOUT | WEST TULLOS ROAD          |                     |
| WEST TULLOS ROAD          | ABBOTSHALL ROUNDABOUT     | LEFT - 1ST EXIT     |
| ABBOTSHALL ROUNDABOUT     | ABBOTSHALL ROAD           |                     |
| ABBOTSHALL ROAD           | CRAIGSHAW DRIVE           | RIGHT               |
| CRAIGSHAW DRIVE           | DEPOT                     | LEFT                |

#### Silver route 9



| SILVER ROUTE 9            |                           |                        |
|---------------------------|---------------------------|------------------------|
| STREET                    | то                        | DIRECTION              |
| WEST TULLOS DEPOT         | CRAIGSHAW DRIVE           | RIGHT                  |
| CRAIGSHAW DRIVE           | ABBOTSWELL ROAD           | LEFT                   |
| ABBOTSWELL ROAD           | ABBOTSWELL ROUNDABOUT     | RIGHT - 2ND EXIT       |
| ABBOTSWELL ROUNDABOUT     | WEST TULLOS ROAD          | -                      |
| WEST TULLOS ROAD          | KING GEORGE VI ROUNDABOUT | STRAIGHT ON - 2ND EXIT |
| KING GEORGE VI ROUNDABOUT | GREAT SOUTHERN ROAD       | _                      |
| GREAT SOUTHERN ROAD       | BRIDGE OF DEE ROUNDABOUT  | RIGHT - 3RD EXIT       |
| BRIDGE OF DEE ROUNDABOUT  | STONEHAVEN ROAD           | _                      |
| STONEHAVEN ROAD           | GARTHDEE ROUNDABOUT       | STRAIGHT ON - 2ND EXIT |
| GARTHDEE ROUNDABOUT       | SOUTH ANDERSON DRIVE      | -                      |
| SOUTH ANDERSON DRIVE      | BROOMHIL ROUNDABOUT       | RIGHT - 3RD EXIT       |
| BROOMHIL ROUNDABOUT       | BROOMHILL ROAD            | -                      |
| BROOMHILL ROAD            | PITSTRUAN PLACE           | LEFT                   |
| PITSTRUAN PLACE           | GREAT WESTERN ROAD        | LEFT                   |
| GREAT WESTERN ROAD        | FOREST AVENUE             | RIGHT                  |
| FOREST AVENUE             | RENDEZVOUS ROUNDABOUT     | LEFT                   |
| RENDEZVOUS ROUNDABOUT     | CROMWELL ROAD             | LEFT - 1ST EXIT        |
| CROMWELL ROAD             | SEAFIELD ROUNDABOUT       | STRAIGHT ON - 2ND EXIT |
| SEAFIELD ROUNDABOUT       | SEAFIELD ROAD             | STRAIGHT ON - 2ND EXIT |
| SEAFIELD ROAD             | COUNTESSWELLS ROAD        | STRAIGHT ON            |
| COUNTESSWELLS ROAD        | COUNTESSWELLS ROAD        | FOLLOW ON TO           |
| COUNTESSWELLS ROAD        | COUNTESSWELLS ROAD        | STRAIGHT ON            |
| COUNTESSWELLS ROAD        | SLOPEFIELD ROUNDABOUT     | ROUND - 3RD EXIT       |
| SLOPEFIELD ROUNDABOUT     | COUNTESSWELLS ROAD        |                        |
| COUNTESSWELLS ROAD        | COUNTESSWELLS AVENUE      | LEFT                   |
| COUNTESSWELLS AVENUE      | COUNTESSWELLS AVENUE      | TURN AROUND            |
| COUNTESSWELLS AVENUE      | COUNTESSWELLS ROAD        | LEFT                   |

| COUNTESSWELLS ROAD    | SPRINGFIELD ROAD      | LEFT                   |
|-----------------------|-----------------------|------------------------|
| SPRINGFIELD ROAD      | QUEENS ROAD           | LEFT                   |
| QUEENS ROAD           | HAZELDENE ROAD        | LEFT                   |
| HAZELDENE ROAD        | CRAIGIEBUCKLER AVENUE | LEFT                   |
| CRAIGIEBUCKLER AVENUE | SPRINGFIELD ROAD      | RIGHT                  |
| SPRINGFIELD ROAD      | SPRINGFIELD ROAD      | STRAIGHT ON            |
| SPRINGFIELD ROAD      | SPRINGFIELD ROAD      | STRAIGHT ON            |
| SPRINGFIELD ROAD      | CRAIGTON ROAD         | LEFT                   |
| CRAIGTON ROAD         | GREAT WESTERN ROAD    | RIGHT                  |
| GREAT WESTERN ROAD    | ST JOHNS TERRACE      | FOLLOW ON TO           |
| ST JOHNS TERRACE      | SPRINGFIELD ROAD      | RIGHT                  |
| SPRINGFIELD ROAD      | CRAIGTON ROAD         | LEFT                   |
| CRAIGTON ROAD         | AIRYHALL AVENUE       | RIGHT                  |
| AIRYHALL AVENUE       | COUNTESSWELLS ROAD    | RIGHT                  |
| COUNTESSWELLS ROAD    | COUNTESSWELLS ROAD    | RIGHT                  |
| COUNTESSWELLS ROAD    | SEAFIELD ROAD         | FOLLOW ON TO           |
| SEAFIELD ROAD         | SEAFIELD ROUNDABOUT   | STRAIGHT ON - 2ND EXIT |
| SEAFIELD ROUNDABOUT   | CROMWELL ROAD         |                        |
| CROMWELL ROAD         | RENDEZVOUS ROUNDABOUT | STRAIGHT ON - 2ND EXIT |
| RENDEZVOUS ROUNDABOUT | UNION GROVE           | STRAIGHT ON - 2ND EXIT |
| UNION GROVE           | ASHLEY ROAD           | RIGHT                  |
| ASHLEY ROAD           | GREAT WESTERN ROAD    | RIGHT                  |
| GREAT WESTERN ROAD    | PITSTRUAN PLACE       | LEFT                   |
| PITSTRUAN PLACE       | BROOMHILL ROAD        | LEFT                   |
| BROOMHILL ROAD        | HOLBURN STREET        | STRAIGHT ON - 2ND EXIT |
| HOLBURN STREET        | HOLBURN ROUNDABOUT    | RIGHT - 2ND EXIT       |
| HOLBURN ROUNDABOUT    | FONTHILL ROAD         | RIGHT - 2ND EXIT       |
| FONTHILL ROAD         | BON ACCORD STREET     | LEFT                   |
| BON ACCORD STREET     | UNION STREET          | RIGHT                  |
| UNION STREET          | CROWN STREET          | RIGHT                  |
| CROWN STREET          | FERRYHILL ROAD        | RIGHT                  |
| FERRYHILL ROAD        | FONTHILL ROAD         | FOLLOW ON TO           |
| FONTHILL ROAD         | WHINHILL ROAD         | LEFT                   |
| WHINHILL ROAD         | WHINHILL ROUNDABOUT   | STRAIGHT ON - 1ST EXIT |

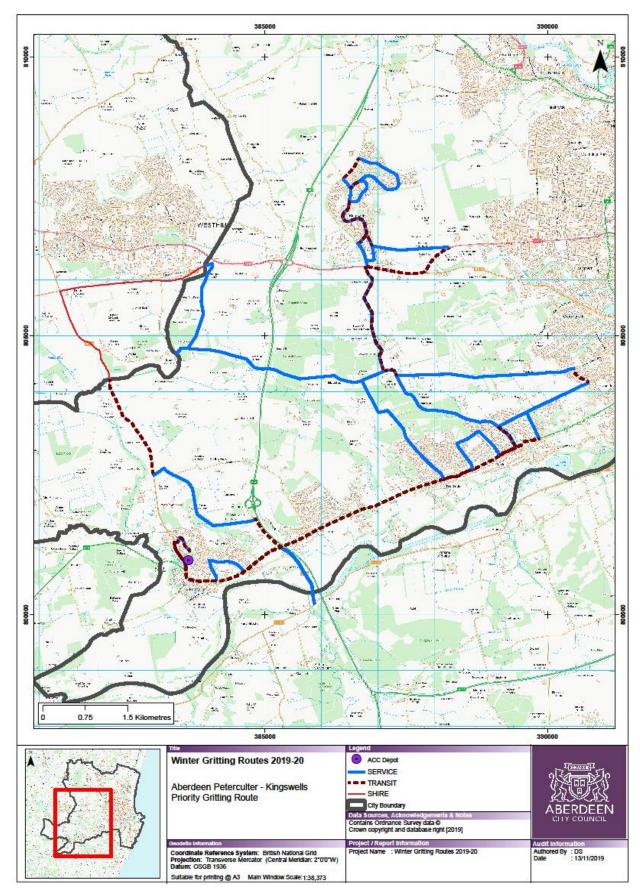
| WHINHILL ROUNDABOUT    | GREAT SOUTHERN ROAD    | STRAIGHT ON - 1ST EXIT |
|------------------------|------------------------|------------------------|
| GREAT SOUTHERN ROAD    | MURRAY TERRACE         | LEFT                   |
| MURRAY TERRACE         | BRIGHT STREET          | LEFT                   |
| BRIGHT STREET          | BRUNSWICK PLACE        | RIGHT                  |
| BRUNSWICK PLACE        | POLMUIR ROAD           | RIGHT                  |
| POLMUIR ROAD           | MURRAY TERRACE         | RIGHT                  |
| MURRAY TERRACE         | BRIGHT STREET          | RIGHT                  |
| BRIGHT STREET          | BRUNSWICK PLACE        | RIGHT                  |
| BRUNSWICK PLACE        | POLMUIR ROAD           | LEFT                   |
| POLMUIR ROAD           | FERRYHILL ROAD         | LEFT                   |
| FERRYHILL ROAD         | BON ACCORD STREET      | RIGHT                  |
| BON ACCORD STREET      | UNION STREET           | RIGHT                  |
| UNION STREET           | UNION TERRACE          | LEFT                   |
| UNION TERRACE          | ROSEMOUNT VIADUCT      | LEFT                   |
| ROSEMOUNT VIADUCT      | SOUTH MOUNT STREET     | FOLLOW ON TO           |
| SOUTH MOUNT STREET     | ROSEMOUNT PLACE        | LEFT                   |
| ROSEMOUNT PLACE        | ESSLEMONT AVENUE       | LEFT                   |
| ESSLEMONT AVENUE       | SKENE STREET           | LEFT                   |
| SKENE STREET           | SKENE STREET           | FOLLOW ON TO           |
| SKENE STREET           | WOOLMANHILL ROUNDABOUT | ROUND - 4TH EXIT       |
| WOOLMANHILL ROUNDABOUT | SKENE STREET           | ROUND - 4TH EXIT       |
| SKENE STREET           | ROSEMOUNT VIADUCT      | LEFT                   |
| ROSEMOUNT VIADUCT      | SCHOOLHILL             | FOLLOW ON TO           |
| SCHOOLHILL             | UPPERKIRKGATE          | FOLLOW ON TO           |
| UPPERKIRKGATE          | GALLOWGATE             | LEFT                   |
| GALLOWGATE             | LITTLE JOHN STREET     | RIGHT                  |
| LITTLE JOHN STREET     | WEST NORTH STREET      | RIGHT                  |
| WEST NORTH STREET      | KING STREET            | RIGHT                  |
| KING STREET            | CASTLE STREET          | FOLLOW ON TO           |
| CASTLE STREET          | UNION STREET           | FOLLOW ON TO           |
| UNION STREET           | BROAD STREET           | RIGHT                  |
| BROAD STREET           | GALLOWGATE             | FOLLOW ON TO           |
| GALLOWGATE             | MOUNTHOOLY ROUNDABOUT  | STRAIGHT ON - 2ND EXIT |
| MOUNTHOOLY ROUNDABOUT  | CAUSEWAYEND            | -                      |
| CAUSEWAYEND            | POWIS PLACE            | FOLLOW ON TO           |
| GEORGE STREET          | JOHN STREET            | LEFT                   |
| POWIS PLACE            | GEORGE STREET          | LEFT                   |

| MABERLEY STREET   ROSEMOUNT ROUNDABOUT   MABERLEY STREET   SPRING GARDEN   GALLOWGATE   MOUNTHOOLY ROUNDABOUT   MOUNTHOOLY   KINGS CRESCENT   SPITAL   COLLEGE STREET                 | RIGHT<br>STRAIGHT ON<br>ROUND - 4TH EXIT<br>STRAIGHT ON<br>LEFT<br>RIGHT - 3RD EXIT<br>LEFT<br>FOLLOW ON TO<br>FOLLOW ON TO   |
|---|---|
| MABERLEY STREET         ROSEMOUNT ROUNDABOUT         MABERLEY STREET         SPRING GARDEN         GALLOWGATE         MOUNTHOOLY ROUNDABOUT         MOUNTHOOLY         KINGS CRESCENT | STRAIGHT ON<br>ROUND - 4TH EXIT<br>STRAIGHT ON<br>LEFT<br>RIGHT - 3RD EXIT<br>LEFT  |
| MABERLEY STREET<br>ROSEMOUNT ROUNDABOUT<br>MABERLEY STREET<br>SPRING GARDEN<br>GALLOWGATE<br>MOUNTHOOLY ROUNDABOUT<br>MOUNTHOOLY  | STRAIGHT ON<br>ROUND - 4TH EXIT<br>STRAIGHT ON<br>LEFT<br>RIGHT - 3RD EXIT  |
| MABERLEY STREET<br>ROSEMOUNT ROUNDABOUT<br>MABERLEY STREET<br>SPRING GARDEN<br>GALLOWGATE<br>MOUNTHOOLY ROUNDABOUT  | STRAIGHT ON<br>ROUND - 4TH EXIT<br>STRAIGHT ON<br>LEFT  |
| MABERLEY STREET ROSEMOUNT ROUNDABOUT MABERLEY STREET SPRING GARDEN GALLOWGATE   | STRAIGHT ON<br>ROUND - 4TH EXIT<br>STRAIGHT ON<br>LEFT  |
| MABERLEY STREET<br>ROSEMOUNT ROUNDABOUT<br>MABERLEY STREET<br>SPRING GARDEN   | STRAIGHT ON<br>ROUND - 4TH EXIT<br>STRAIGHT ON  |
| MABERLEY STREET<br>ROSEMOUNT ROUNDABOUT<br>MABERLEY STREET  | STRAIGHT ON<br>ROUND - 4TH EXIT   |
| MABERLEY STREET<br>ROSEMOUNT ROUNDABOUT   | STRAIGHT ON   |
| MABERLEY STREET   | STRAIGHT ON   |
|   |   |
|   | RIGHT   |
| CHARLOTTE STREET  |   |
| ST ANDREW STREET  | RIGHT   |
| GEORGE STREET   | RIGHT   |
| IOHN STREET   | ROUND - 4TH EXIT  |
| WOOLMANHILL ROUNDABOUT  | ROUND - 4TH EXIT  |
| JOHN STREET   | LEFT  |
| CHARLOTTE STREET  | RIGHT   |
| ST ANDREW STREET  | LEFT  |
| LOCH STREET   | STRAIGHT ON - 2ND EXIT  |
| BERRY STREET  | LEFT  |
| GALLOWGATE  | LEFT  |
| UPPERKIRKGATE   | FOLLOW ON TO  |
| SCHOOLHILL  | LEFT  |
| BLACKFRIARS STREET  | FOLLOW ROUND TO   |
| BLACKFRIARS STREET  | STRAIGHT ON   |
| ST ANDREW STREET  | RIGHT   |
| GEORGE STREET   | LEFT  |
| SPRING GARDEN   | LEFT  |
| LOCH STREET   | LEFT  |
| IOHN STREET   | LEFT  |
| GEORGE STREET   | LEFT  |
| SPRING GARDEN   | LEFT  |
| GALLOWGATE  | LEFT  |
| BERRY STREET  | LEFT - 1ST EXIT   |
|   | GALLOWGATESPRING GARDENSEORGE STREETOHN STREETOCH STREETSPRING GARDENSEORGE STREETST ANDREW STREETSLACKFRIARS STREETSCHOOLHILLJPPERKIRKGATEGALLOWGATEBERRY STREETOCH STREETOHN STREETOHN STREETST ANDREW STREETOHN STREETST ANDREW STREET |

| STREET                            | то                             | DIRECTION              |
|-----------------------------------|--------------------------------|------------------------|
| HIGH STREET                       | ST MACHAR DRIVE                | LEFT                   |
| ST MACHAR DRIVE                   | BEDFORD ROAD                   | LEFT                   |
| BEDFORD ROAD                      | POWIS TERRACE                  | RIGHT                  |
| POWIS TERRACE                     | GREAT NORTHERN ROAD            | FOLLOW ON TO           |
| GREAT NORTHERN ROAD               | KITTYBREWSTER ROUNDABOUT       | RIGHT 4TH EXIT         |
| KITTYBREWSTER ROUNDABOUT          | ST MACHAR DRIVE                |                        |
| ST MACHAR DRIVE                   | SEATON ROUNDABOUT              | LEFT - 1ST EXIT        |
| SEATON ROUNDABOUT                 | KING STREET                    |                        |
| KING STREET                       | DON STREET                     | LEFT                   |
| DON STREET                        | HILLHEAD CAMPUS BUS TURN POINT | LEFT                   |
| HILLHEAD CAMPUS BUS TURN<br>POINT | DON STREET                     | TURN AT TURN POINT     |
| DON STREET                        | KING STREET                    | RIGHT                  |
| KING STREET                       | SEATON ROUNDABOUT              | LEFT - 1ST EXIT        |
| SEATON ROUNDABOUT                 | SCHOOL ROAD                    |                        |
| SCHOOL ROAD                       | GOLF ROAD                      | FOLLOW RIGHT           |
| GOLF ROAD                         | PARK ROAD                      | FOLLOW ON TO           |
| PARK ROAD                         | PARK STREET                    | FOLLOW ON TO           |
| PARK STREET                       | BEACH BOULEVARD ROUNDABOUT     | LEFT - 1ST EXIT        |
| BEACH BOULEVARD<br>ROUNDABOUT     | BEACH BOULEVARD                |                        |
| BEACH BOULEVARD                   | LINKS ROAD                     | LEFT                   |
| LINKS ROAD                        | CONSTITUTION STREET            | LEFT                   |
| CONSTITUTION STREET               | PARK STREET                    | LEFT                   |
| PARK STREET                       | BEACH BOULEVARD ROUNDABOUT     | LEFT - 1ST EXIT        |
| BEACH BOULEVARD<br>ROUNDABOUT     | BEACH BOULEVARD                |                        |
| BEACH BOULEVARD                   | LINKS ROAD                     | LEFT                   |
| LINKS RIOAD                       | URQUHART ROAD                  | LEFT                   |
| URQUHART ROAD                     | PARK ROAD                      | LEFT                   |
| PARK ROAD                         | PARK STREET                    | FOLLOW ON TO           |
| PARK STREET                       | BEACH BOULEVARD ROUNDABOUT     | LEFT - 1ST EXIT        |
| BEACH BOULEVARD                   | BEACH BOULEVARD                |                        |
| ROUNDABOUT<br>BEACH BOULEVARD     | ESPLANADE                      | STRAIGHT ON - 2ND EXIT |
| ESPLANADE                         | KING STREET                    | RIGHT                  |
| KING STREET                       | ELLON ROAD                     | FOLLOW ON TO           |
| ELLON ROAD                        | GORDON BARRACKS ROUNDABOUT     | ROUND - 4TH EXIT       |

| GORDON BARRACKS<br>ROUNDABOUT        | ELLON ROAD                           |                        |
|--------------------------------------|--------------------------------------|------------------------|
| ELLON ROAD                           | KING STREET                          | FOLLOW ON TO           |
| KING STREET                          | ESPLANADE                            | LEFT                   |
| ESPLANADE                            | BEACH BOULEVARD                      | STRAIGHT ON - 1ST EXIT |
| BEACH BOULEVARD                      | LINKS ROAD                           | LEFT                   |
| LINKS ROAD                           | QUEENS LINKS ROUNDABOUT              | LEFT - 2ND EXIT        |
| QUEENS LINKS ROUNDABOUT              | LINKS ROAD                           |                        |
| LINKS ROAD                           | ESPLANADE ROUNDABOUT                 | ROUND - 3RD EXIT       |
| ESPLANADE ROUNDABOUT                 | LINKS ROAD                           |                        |
| LINKS ROAD                           | QUEENS LINKS ROUNDABOUT              | LEFT - 1ST EXIT        |
| QUEENS LINKS ROUNDABOUT              | WELLINGTON STREET                    |                        |
| WELLINGTON STREET                    | YORK STREET                          | LEFT                   |
| YORK STREET                          | ESPLANADE                            | LEFT                   |
| ESPLANADE                            | LINKS ROAD                           | LEFT - 1ST EXIT        |
| LINKS ROAD                           | QUEENS LINKS ROUNDABOUT              | LEFT - 1ST EXIT        |
| QUEENS LINKS ROUNDABOUT              | WELLINGTON STREET                    | _                      |
| WELLINGTON STREET                    | ST CLEMENT STREET                    | LEFT                   |
| ST CLEMENT STREET                    | CHURCH STREET                        | RIGHT                  |
| CHURCH STREET                        | WATERLOO QUAY                        | LEFT                   |
| WATERLOO QUAY                        | WELLINGTON STREET                    | LEFT                   |
| WELLINGTON STREET                    | ST CLEMENT STREET                    | LEFT                   |
| ST CLEMENT STREET                    | MILLAR STREET                        | RIGHT                  |
| MILLAR STREET                        | CASTLE TERRACE                       | FOLLOW ON TO           |
| CASTLE TERRACE                       | COMMERCE STREET                      | LEFT                   |
| COMMERCE STREET                      | REGENT QUAY                          | RIGHT                  |
| REGENT QUAY                          | VIRGINIA STREET                      | LEFT                   |
| VIRGINIA STREET                      | MARKET STREET                        | LEFT                   |
| MARKET STREET                        | NORTH ESPLANADE WEST                 | RIGHT                  |
| NORTH ESPLANADE WEST                 | QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | LEFT - 1ST EXIT        |
| QUEEN ELIZABETH BRIDGE<br>ROUNDABOUT | QUEEN ELIZABETH BRIDGE               | _                      |
| QUEEN ELIZABETH BRIDGE               | CRAIGINCHES ROUNDABOUT               | RIGHT - 3RD EXIT       |
| CRAIGINCHES ROUNDABOUT               | WELLINGTON ROAD                      |                        |
| WELLINGTON ROAD                      | CRAIGSHAW DRIVE                      | RIGHT                  |
| CRAIGSHAW DRIVE                      | WEST TULLOS DEPOT                    | RIGHT                  |

### Silver route 10



| STREET                 | ТО                     | DIRECTION            |
|------------------------|------------------------|----------------------|
|                        |                        |                      |
| THE BUSH               | MALCOLM ROAD           | RIGHT                |
| MALCOLM ROAD           | JOHNSTON GARDENS       | RIGHT                |
| JOHNSTON GARDENS       | JOHNSTON GARDENS       | TURN AT BUS TERMINUS |
| JOHNSTON GARDENS       | MALCOLM ROAD           | LEFT                 |
| MALCOLM ROAD           | NORTH DEESIDE ROAD     | LEFT                 |
| NORTH DEESIDE ROAD     | SCHOOL ROAD            | LEFT                 |
| SCHOOL ROAD            | CORONATION ROAD        | RIGHT                |
| CORONATION ROAD        | NORTH DEESIDE ROAD     | LEFT                 |
| NORTH DEESIDE ROAD     | MILLTIMBER BRAE        | RIGHT                |
| MILLTIMBER BRAE        | MILLTIMBER BRAE        | TURN                 |
| MILLTIMBER BRAE        | NORTH DEESIDE ROAD     | RIGHT                |
| NORTH DEESIDE ROAD     | KIRK BRAE              | LEFT                 |
| KIRK BRAE              | BLACKTOP ROAD          | STRAIGHT ON          |
| BLACKTOP ROAD          | BAILLIESWELLS ROAD     | LEFT                 |
| BAILLIESWELLS ROAD     | NORTH DEESIDE ROAD     | LEFT                 |
| NORTH DEESIDE ROAD     | QUARRY ROAD            | LEFT                 |
| QUARRY ROAD            | HILLVIEW CRESCENT      | RIGHT                |
| HILLVIEW CRESCENT      | CULTS AVENUE           | RIGHT                |
| CULTS AVENUE           | NORTH DEESIDE ROAD     | LEFT                 |
| NORTH DEESIDE ROAD     | KIRK BRAE              | LEFT                 |
| KIRK BRAE              | FRIARSFIELD ROAD       | RIGHT                |
| FRIARSFIELD ROAD       | ABBOTSHALL ROAD        | RIGHT                |
| ABBOTSHALL ROAD        | NORTH DEESIDE ROAD     | RIGHT                |
| NORTH DEESIDE ROAD     | KIRK BRAE              | RIGHT                |
| KIRK BRAE              | FRIARSFIELD ROAD       | RIGHT                |
| FRIARSFIELD ROAD       | CRAIGTON ROAD          | FOLLOW ON TO         |
| CRAIGTON ROAD          | AIRYHALL AVENUE        | LEFT                 |
| AIRYHALL AVENUE        | COUNTESSWELLS ROAD     | LEFT                 |
| COUNTESSWELLS ROAD     | CULTS - KINGSHILL ROAD | RIGHT                |
| CULTS - KINGSHILL ROAD | CULTS - KINGSHILL ROAD | RIGHT                |
| CULTS - KINGSHILL ROAD | KINGSWELLS ROUNDABOUT  | RIGHT - 3RD EXIT     |
| KINGSWELLS ROUNDABOUT  | SKENE ROAD             | RIGHT - 3RD EXIT     |
| SKENE ROAD             | MIDDENCRAIG ROUNDABOUT | LEFT - 1ST EXIT      |

| MIDDENCRAIG ROUNDABOUT                 | LANG STRACHT                           |                        |
|--|--|------------------------|
| LANG STRACHT                           | LANG STRACHT (BUS GATE)                | LEFT                   |
| LANG STRACHT (BUS GATE)                | FAIRLEY ROAD                           | RIGHT                  |
| FAIRLEY ROAD                           | KINGSWOOD DRIVE                        | RIGHT                  |
| KINGSWOOD DRIVE                        | KINGSWELLS CRESCENT                    | RIGHT                  |
| KINGSWELLS CRESCENT                    | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | LEFT                   |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | KINGSWOOD DRIVE                        | LEFT                   |
| KINGSWOOD DRIVE                        | KINGSWELLS CRESCENT                    | LEFT                   |
| KINGSWELLS CRESCENT                    | KINGSWELLS AVENUE                      | RIGHT                  |
| KINGSWELLS AVENUE                      | KINGSWOOD DRIVE                        | LEFT                   |
| KINGSWOOD DRIVE                        | KINGSWOOD DRIVE                        | FOLLOW ON TO           |
| KINGSWOOD DRIVE                        | CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | LEFT                   |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | FAIRLEY ROAD                           | LEFT                   |
| FAIRLEY ROAD                           | FAIRLEY ROAD                           | LEFT                   |
| FAIRLEY ROAD                           | FAIRLEY ROAD                           | FOLLOW ON TO           |
| FAIRLEY ROAD                           | KINGSWOOD DRIVE                        | LEFT                   |
| KINGSWOOD DRIVE                        | CHAPEL OF STONEYWOOD - FAIRLEY<br>ROAD | LEFT                   |
| CHAPEL OF STONEYWOOD -<br>FAIRLEY ROAD | KINGSWELLS ROUNDABOUT                  | STRAIGHT ON - 2ND EXIT |
| KINGSWELLS ROUNDABOUT                  | CULTS - KINGSHILL ROAD                 | STRAIGHT ON - 2ND EXIT |
| CULTS - KINGSHILL ROAD                 | BLACKTOP ROAD                          | RIGHT                  |
| BLACKTOP ROAD                          | BLACKTOP ROAD                          | TURN AROUND            |
| BLACKTOP ROAD                          | BISHOPDAMS ROAD                        | LEFT                   |
| BISHOPDAMS ROAD                        | B9119 TO CITY LIMIT                    | LEFT                   |
| B9119 TO CITY LIMIT                    | B9119                                  | STRAIGHT ON            |
| B9119                                  | PROSPECT ROUNDABOUT                    | STRAIGHT ON - 2ND EXIT |
| PROSPECT ROUNDABOUT                    | B9119                                  |                        |
| B9119                                  | TAQA ROUNDABOUT                        | STRAIGHT ON - 2ND EXIT |
| TAQA ROUNDABOUT                        | B9119                                  |                        |
| B9119                                  | TOTAL ROUNDABOUT                       | STRAIGHT ON - 2ND EXIT |
| TOTAL ROUNDABOUT                       | B9119                                  |                        |
| B9119                                  | CARNIE ROUNDABOUT                      | LEFT - 1ST EXIT        |
| CARNIE ROUNDABOUT                      | MALCOLM ROAD TO CITY LIMIT             |                        |

| MALCOLM ROAD TO CITY LIMIT | MALCOLM ROAD       | FOLLOW ON    |
|----------------------------|--------------------|--------------|
| MALCOLM ROAD               | CONTLAW ROAD       | LEFT         |
| CONTLAW ROAD               | CULTER HOUSE ROAD  | FOLLOW ON TO |
| CULTER HOUSE ROAD          | AWPR ACCESS ROAD   | RIGHT        |
| AWPR ACCESS ROAD           | NORTH DEESIDE ROAD | RIGHT        |
| NORTH DEESIDE ROAD         | MALCOLM ROAD       | RIGHT        |
| MALCOLM ROAD               | THE BUSH           | RIGHT        |

### (c) **TRACTOR ROUTE**

In order to cover car parks, steep hills and other specific locations/pedestrian areas, the following route will be operated by tractor from Tullos Depot.

Farquhar Road / Farquhar Avenue Abbey Road / Baxter Street/ Mansfield Road / Glenbervie Road St Nicholas Street / Correction Wynd / St Nicholas Lane Summer Street Car Park Jack's Brae Summer Street from Skene Road to Skene Terrace Gallowgate Car Park Kittybrewster Car Park AECC (Park and Ride) Castlegate / Market Stance Virginia Street / Mearns Street Car Park

#### (d) SNOW CLEARANCE AREAS

After priority routes have been cleared, when lying snow persists this will be tackled on an area basis in accordance with the following areas.

| 1. | BUCKSBURN           | West of Auchmill Rd Dual Carriageway Section           |                                       |
|----|---------------------|--|---------------------------------------|
|    |                     | South of Bankhead Roa                                  | d Railway Bridge and Greenburn Drive  |
| 2. | DYCE                | North of Bankhead Road                                 | d Railway Bridge and Greenburn Drive  |
| 3. | BRIDGE OF DON       | North of Bridge of Don, and North of Brig o' Balgownie |                                       |
| 4. | KINGSWELLS          |  |                                       |
|    |                     | AREAS BOUNDED<br>BY                                    | -                                     |
| 5. | NORTHFIELD          | NORTH  | Heathryfold Housing Scheme            |
|    |                     | SOUTH  | Provost Fraser Drive                  |
|    |                     | EAST   | North Anderson Drive                  |
|    |                     | WEST   | Howes Road                            |
| 6. | WOODSIDE            | NORTH  | River Don                             |
|    |                     | SOUTH  | Rosehill Drive / Back Hilton Road     |
|    |                     | EAST   | Great Northern Road / Powis Terrace   |
|    |                     | WEST   | North Anderson Drive                  |
| 7. | SEATON / TILLYDRONE | NORTH  | River Don                             |
|    |                     | SOUTH  | St Machar Drive - School Road         |
|    |                     | EAST   | Beach Esplanade                       |
|    |                     | WEST   | Donbank Terrace, Don Street / Great   |
| 8. | MASTRICK            | NORTH  | Northern Road<br>Provost Fraser Drive |

SOUTH

Lang Stracht

|     |                        | EAST  | North Anderson Drive                                     |
|-----|------------------------|-------|--|
|     |                        | WEST  | Sheddocksley Housing Scheme                              |
| 9.  | CORNHILL / CAIRNCRY    | NORTH | Rosehill Drive / Back Hilton Road                        |
|     |                        | SOUTH | Westburn Road / Hutcheon Street                          |
|     |                        | EAST  | George Street / Powis Terrace                            |
|     |                        | WEST  | North Anderson Drive                                     |
| 10. | OLD ABERDEEN           | NORTH | St Machar Drive / School Road                            |
|     |                        | SOUTH | Hutcheon Street / Nelson Street /<br>Urquhart Road       |
|     |                        | EAST  | Beach Esplanade  |
|     |                        | WEST  | Powis Terrace/George Street                              |
|     |                        |       |  |
| 11. | ST. CLEMENTS           | NORTH | Nelson Street / Urquhart Road /<br>Hutcheon Street       |
|     |                        | SOUTH | Regent Quay / Waterloo Quay                              |
|     |                        | EAST  | Beach Esplanade  |
|     |                        | WEST  | Mount Street / South Mount Street /                      |
| 12. | WOODEND / SUMMERHILL   | NORTH | Rosemount Viaduct / Schoolhill / St<br>Lang Stracht      |
|     |                        | SOUTH | Skene Road/Queen's Road                                  |
|     |                        | EAST  | Anderson Drive   |
|     |                        | WEST  | A944 Lang Stracht  |
| 13. | MIDSTOCKET / KINS GATE | NORTH | Westburn Road  |
|     |                        | SOUTH | Queen's Road / Carden Place / Skene                      |
|     |                        | EAST  | Street<br>Mount Street / South Mount Street              |
|     |                        | WEST  | Anderson Drive   |
| 14. | CENTRAL AREA           | NORTH | Skene Street/Schoolhill                                  |
|     |                        | SOUTH | Willowbank Road / Springbank                             |
|     |                        | EAST  | Terrace/Guild Street<br>St Nicholas Street/Market Street |
|     |                        | WEST  | Rose Street/Holburn Street                               |
| 15. | HAZLEHEAD / BRAESIDE   | NORTH | Skene Road / Queen's Road                                |
|     |                        | SOUTH | North Deeside Road / Great Western                       |
|     |                        | EAST  | Road<br>Anderson Drive                                   |
|     |                        | WEST  | Woodlands / Craigton Road                                |
| 16. | HOLBURN / BROOMHILL    | NORTH | Queen's Road / Carden Place                              |
| -   |                        | SOUTH | Holburn Street   |
|     |                        |       |  |

|     |                       | EAST  | Rose Street  |
|-----|-----------------------|-------|--|
|     |                       | WEST  | South Anderson Drive                                     |
| 17. | FERRYHILL             | NORTH | Willowbank Road / Springbank Terrace                     |
|     |                       | SOUTH | / Guild Street<br>Riverside Drive / North Esplanade West |
|     |                       | EAST  | Market Street  |
|     |                       | WEST  | Holburn Street   |
| 18. | TORRY                 | NORTH | South Esplanade West / East /                            |
|     |                       | SOUTH | Greyhope Road<br>Tullos Industrial Estate                |
|     |                       | EAST  | Greyhope Road / Coast Road                               |
|     |                       | WEST  | Wellington Road  |
| 19. | MANNOFIELD / GARTHDEE | NORTH | North Deeside Road/Great Western                         |
|     |                       | SOUTH | Road<br>Garthdee Road                                    |
|     |                       | EAST  | South Anderson Drive                                     |
|     |                       | WEST  | Pitfodels Station Road                                   |
| 20. | KINCORTH              | NORTH | South Deeside Road / Great Southern                      |
|     |                       | SOUTH | Road<br>Wellington Road (Charleston)                     |
|     |                       | EAST  | Wellington Road  |
|     |                       | WEST  | City Boundary  |
| 21. | COVE                  | NORTH | Tullos Industrial Estate                                 |
|     |                       | SOUTH | City Boundary  |
|     |                       | EAST  | Sea  |
|     |                       | WEST  | Wellington Road  |
| 22. | CULTS/BIELDSIDE       | NORTH | Countesswells Road                                       |
| 22. | COLTS/DIELDSIDE       | SOUTH | River Dee  |
|     |                       |       |  |
|     |                       | EAST  | Craigton Road / Pitfodels Station Road                   |
|     |                       | WEST  | Hillhead Road  |
| 23. | MILLTIMBER            | NORTH | A944   |
|     |                       | SOUTH | River Dee  |
|     |                       | EAST  | Hillhead Road  |
|     |                       | WEST  | Contlaw Road   |
| 24. | CULTER                | NORTH | City Boundary  |
|     |                       | SOUTH | River Dee  |
|     |                       | EAST  | Contlaw Road   |
|     |                       | WEST  | Anguston Road  |
|     |                       |       |  |

### (e) FOOTWAY ROUTES

#### Location of Plant and Resources (Footways)

| <u>Area</u> |                         | <u>Plant</u>   | <u>Depot</u> |
|-------------|-------------------------|----------------|--------------|
| 1.          | Bucksburn               | 1 Kubota       | Bucksburn    |
| 2.          | Dyce                    | Shared area 1  |              |
| 3.          | Bridge of Don           | 3 Kubota       | Bucksburn    |
| 4.          | Kingswells              | 1 Kubota       | Bucksburn    |
| 5.          | Northfield              | 2 Kubota       | Mastrick     |
| 6.          | Woodside                | Shared area 13 |              |
| 7.          | Seaton / Tilllydrone    | 1 Kubota       | Bucksburn    |
| 8.          | Mastrick                | 2 Kubota       | Mastrick     |
| 9.          | Cornhill / Cairncry     | 1 Kubota       | Tullos       |
| 10.         | Old Aberdeen            | Shared Area 7  |              |
| 11          | St Clements             | Shared Area 14 |              |
| 12          | Woodend / Summerhill    | 1 Kubota       | Tullos       |
| 13          | Midstocket / Kings Gate | 1 Kubota       | Tullos       |
| 14          | Central Area            | 2 Kubota       | Tullos       |
| 15          | Hazelhead / Braeside    | Shared area 19 |              |
| 16          | Holburn / Broomhill     | Shared Area 14 |              |
| 17          | Ferryhill               | Shared Area 20 |              |
| 18          | Torry                   | Shared Area 21 |              |
| 19          | Mannofield / Garthdee   | 1 Kubota       | Tullos       |
| 20          | Kincorth                | 1 Kubota       | Tullos       |
| 21          | Cove                    | 1 Kubota       | Tullos       |
| 22          | Cults / Bieldside       | 1 Kubota       | Culter       |
| 23          | Milltimber              | 1 Kubota       | Culter       |
| 24          | Culter                  | 1 Kubota       | Culter       |
|             |                         |                |              |

### Priorities in Treatment

When working in above locations, priority to be given to those areas, as part of an area response steep gradients, and to City Centre Routes 1 and 2, in particular.

The footways within Areas 1 to 24 will be treated on an area by area basis. However, within each specific area, the footways indicated in the following footway sections will be given priority within that area.

### **CITY CENTRE FOOTWAY PRIORITY 1 GRITTING ROUTE 1**

Commence Bridge of Dee Roundabout at Holburn Street Holburn Street East F/P to Riverside Terrace Drive to Holburn Street at Fonthill Road Holburn Street East F/P to Union Street Union Street South F/P to Bridge Street Bridge Street West F/P to Guild Street Bridge Street East F/P to Union Street Union Street South F/P to Market Street Market Street West F/P to North Esplanade West Market Street East F/P to Union Street Union Street South F/P to Castle Street Castle Street South F/P to King Street King Street East F/P to Nelson Street King Street West F/P to Castle Street Castle Street North F/P to Broad Street Broad Street East F/P to Schoolhill Schoolhill North F/P to Rosemount Viaduct Rosemount Viaduct North F/P to South Mount Street South Mount Street East F/P to Rosemount Place Rosemount Place North F/P to Argyll Place Rosemount Place South F/P to South Mount Street South Mount Street West F/P to Rosemount Viaduct Rosemount Viaduct South F/P to Union Terrace Union Terrace West F/P to Union Street Union Terrace East F/P to Schoolhill Schoolhill South F/P to Broad Street Broad Street West F/P to Union Street Union Street North F/P to Holburn Street Holburn Street West F/P to Union Grove Union Grove North F/P to Forest Avenue Union Grove South F/P to Holburn Street Holburn Street West F/P to Nellfield Place Drive to Holburn Street/Riverside Terrace Holburn Street West F/P to Bridge of Dee Roundabout

### CITY CENTRE FOOTWAY PRIORITY 1 GRITTING ROUTE 2

Drive Rose Street Rose Street West F/P to Thistle Street Thistle Street South F/P to Albert Street Thistle Street North F/P to Rose Street Rose Street West F/P to Esslemont Avenue Esslemont Avenue West F/P to Rosemount Place Esslemont Avenue East F/P to Rose Street Rose Street East F/P to Union Street Drive to Chapel Street/Union Street Junction Chapel Street West F/P to Huntly Street Huntly Street South F/P to Rose Street Drive to Huntly Street/Chapel Street Junction Chapel Street East F/P to Union Street Drive to Union Street/Bon Accord Street Junction Bon Accord Street West F/P to Fonthill Road Bon Accord East F/P to Union Street Drive to Union Street/Crown Street Junction Crown Street West F/P to Ferryhill Road Ferryhill Road North F/P to Bon Accord Street Ferryhill Road South F/P to Crown Street Crown Street East F/P to Union Street Drive to Windmill Brae North F/P to Bath Street Windmill Brae South F/P to Crown Street Drive to Bridge Street/Link Brae Junction Link Brae South F/P Drive to Guild Street/Bridge Street Junction Guild Street North F/P to Market Street Trinity Quay North F/P to Marischal Street Drive to West North Street Littlejohn Street Junction Littlejohn Street South F/P Drive to Gallowgate Upper Kirkgate Junction Gallowgate West F/P to Berry Street Berry Street South F/P to Loch Street Loch Street South F/P to George Street George Street West F/P to John Street John Street South F/P to North St Andrew Street John Street North F/P to George Street George Street West F/P to Hutcheon Street George Street East F/P to Loch Street Loch Street North F/P to Berry Street Berry Street North F/P to Gallowgate Gallowgate East F/P to Littlejohn Street Littlejohn Street North F/P

| AREA                   | PRIORITY FOOTWAYS  |
|------------------------|--|
| 1. BUCKSBURN           | Kepplehills Road<br>Sclattie Park<br>Sclattie Circle<br>Hopetoun Grange<br>Howes View<br>Bankhead Road<br>Oldmeldrum Road  |
| 2. DYCE                | Victoria Street (Riverview Dr to Gladstone Pl.)<br>Dyce Shopping Centre  |
| 3. BRIDGE OF DON       | Newburgh Road<br>Jesmond Drive (Middleton Rd to Whitestripes<br>Way)<br>Braehead Way<br>Bodachra Road<br>Harehill Road<br>Cairnfold Road<br>Danestone Terrace<br>Scotstown Gardens<br>Ellon Road (Bridge of Don to Broadfold Road) |
| 5. NORTHFIELD          | Lintmill Terrace<br>Quarry Road (at shops)<br>Byron Avenue (at shops)<br>Moir Green (at shops)   |
| 7. SEATON / TILLYDRONE | King Street (School Road to High Flats)<br>School Road<br>Tillydrone Avenue<br>Tillydrone Terrace<br>Wingate Road<br>Dempsey Terrace<br>Conningham Gardens   |
| 8. MASTRICK            | Greenfern Road (at shops)  |
| 9. CORNHILL / CAIRNCRY | Cornhill Road (Ashgrove Rd to Westburn Rd)<br>Berryden Road<br>Rosehill Drive (at shops)   |
| 11. ST. CLEMENTS       | Boulevard (Roundabout to Railway Bridge)   |
| 12. WOODEND /          | Eday Drive<br>Eday Road (Eday Dr to Stronsay Dr)   |

| SUMMERHILL                   | Summerhill Shopping Centre  |
|------------------------------|---|
| 15. HAZLEHEAD /<br>BRAESIDE  | Countesswells Road (at shops)<br>Springfield Road (Countesswells to Airyhall)<br>Great Western Road (Morningside Rd to South<br>Anderson Drive)   |
| 17. FERRYHILL                | South Crown Street<br>Albury Place  |
| 18. TORRY                    | Menzies Road (at shops corner of Grampian<br>Place and Victoria Rd end)<br>Grampian Place (Menzies Rd to Walker Rd)<br>Victoria Road (Menzies Rd to Mansfield Rd)<br>Mansfield Road<br>Glenbervie Road<br>Abbey Place<br>Rockall Road<br>Ladywell Place<br>Brimmond Place<br>Battock Place<br>Oscar Place |
| 19. MANNOFIELD /<br>GARTHDEE | Morrison Drive<br>Ivanhoe Walk<br>Talisman Walk<br>Deeside Gardens<br>Deeside Drive<br>Deeside Crescent   |
| 22. CULTS / BIELDSIDE        | Abbotshall Road<br>Kirk Brae<br>North Deeside Road (South Avenue to Cults<br>Hotel)<br>Cults Avenue<br>Hillview Crescent<br>Quarry Road<br>Cairn Road<br>Baillieswells Road<br>North Deeside Road (at Bieldside Shops)  |
| 23. MILLTIMBER               | Contlaw Brae<br>Monearn Gardens   |
| 24. CULTER                   | Malcolm Road<br>North Deeside Road (Malcolm Rd to Cairn Rd)<br>School Road<br>Towerview Road<br>Coronation Road<br>Cairn Road   |

# (f) STEPS/RAMPS FOR SPECIAL ATTENTION

# Priority One

| Commerce Street to Castlehill        | Steps/Ramp |
|--------------------------------------|------------|
| Crown Terrace to Bridge Street       | Steps      |
| Green to Union Street                | Steps      |
| Mounthooly                           | Steps      |
| Skene Terrace to North Silver Street | Steps      |
| Virginia Street to Castle Terrace    | Steps      |
| Virginia Street to Marischal Street  | Steps      |
| Union Street - Correction Wynd       | Steps      |

# Priority Two

| Auchmill Road                                    | Steps          |
|--|----------------|
| Bankhead Road to A947                            | Steps/Ramp     |
| Beach Boulevard to Castlehill Terrace            | Steps          |
| Beach Boulevard to Hanover Street                | Steps          |
| Belmont Street – Denburn Road (Patagonian Court) | Steps          |
| Gilbert Road Underpass (both sides)              | Ramps          |
| Great Northern Road to Deer Road                 | Steps / Ramps  |
| Greenburn Underpass (both sides)                 | Steps/Ramps    |
| Ivanhoe Walk                                     | Steps          |
| Kepplehills Road                                 | Steps at Shops |
| Mansfield Road                                   | Steps          |
| Morningside Road to Deeside Gardens              | Steps          |
| St Johns Road to A947                            | Steps/Ramp     |
| Sclattie Park                                    | 3 Sets Steps   |
| Talisman Walk                                    | Steps          |
|  |                |

# (g) **CYCLEWAYS**

The Westhill path (from City boundary to Hazlehead Roundabout)

The Shell path

Cycle paths along Stoneywood Road (section of National Cycle Network)

Cove Road to Duthie Park where cycleway is part of a shared footpath

Wellheads Drive cycle path where cycleway is part of a shared footpath

Cycle paths along Wellington Road where cycleway is part of a shared footpath

### (h) <u>PARKS, CEMETERY ACCESSES, CREMATORIA ACCESS, SHELTERED HOUSING</u> <u>ACCESSES, UNADOPTED FOOTWAYS THROUGH COUNCIL HOUSING AREAS</u> <u>AND ACCESS TO OTHER COUNCIL PROPERTY</u>

The following are lists from the above categories which should be given priority treatment.

1. Accesses to all sheltered housing complexes:

| Multi Storey Sheltered: |   |                  |  |  |  |
|-------------------------|---|------------------|--|--|--|
| Area 5 & 8              | Area 6,7 & 9                                      | Area 16, 18 & 20 |  |  |  |
| Granitehill House       | Ashgrove<br>Court/Gillespie                       | Balmoral Court   |  |  |  |
| Regensburg Court        | Castleton Court                                   | Brimmond Court   |  |  |  |
| Smithfield Court        | Clifton Court<br>Donview House<br>Fullerton Court | Gairn Court      |  |  |  |
|                         | Hilton Court<br>Lord Hays Court                   |                  |  |  |  |
|                         | Meadow Court                                      |                  |  |  |  |
|                         | Murray Court                                      |                  |  |  |  |
|                         | Seaton House<br>Seaview House                     |                  |  |  |  |
|                         | St Clements Court                                 |                  |  |  |  |
|                         | Stewart Park Court                                |                  |  |  |  |
|                         | Woodhill Court                                    |                  |  |  |  |

| Low Rise Sheltered Complexes: |                              |                       |  |  |  |  |  |
|-------------------------------|------------------------------|-----------------------|--|--|--|--|--|
| Area 5 & 8                    | Area 6,7,9 & 11              | Area 16, 18, 19 & 20  |  |  |  |  |  |
| Berrymoss Court               | Aberdon Court                | Balnagask Cottages(1) |  |  |  |  |  |
| Charlie Devine Court          | Bede House Court             | Balnagask Cottages(2) |  |  |  |  |  |
| Clashieknowe                  | Constitution Court           | Craigton Park         |  |  |  |  |  |
| Denmore Court/V.S.            | Dominies Court               | Denseat Court         |  |  |  |  |  |
| Fairley Den                   | Loch Court                   | Janesfield Manor      |  |  |  |  |  |
| Gray Court                    | Short Loanings               | Margaret Clyne Court  |  |  |  |  |  |
| Hamewith                      | South Constitution<br>Street | Mark Bush Court       |  |  |  |  |  |
| Kingswood Court               | Stocket Grange               | Provost Hogg Court    |  |  |  |  |  |
| Lewis Court                   |                              | Rorie Court           |  |  |  |  |  |
| Merrivale                     |                              | Thorngrove Court      |  |  |  |  |  |
| Parkhill Court                |                              |                       |  |  |  |  |  |
| Quarryhill Court              |                              |                       |  |  |  |  |  |
| Taransay Court                |                              |                       |  |  |  |  |  |

2. Accesses to following Social Work Properties

| Area 5 & 8                                     | Area 6,7 & 9                                    | Area 15, 18, & 20                                  |
|--|---|--|
| Quarry Centre, Cumming's<br>Park Crescent      |   | Kincorth Social Work<br>Office, Fauld's Row        |
| Mastrick Social Work<br>Office, Greenfern Road | Rosehill Centre, 202<br>Ashgrove Road West      | Pitfodels House, North<br>Deeside Road, Cults      |
| Williamson Family Centre,<br>Mastrick Close    | Croft House, Oldcroft<br>Place                  | Craigton Road Day<br>Centre, Craigielea<br>Gardens |
| Community Special Needs<br>Group, 2 Croft Road | Aberdon House,<br>Coningham Road,<br>Tillydrone | Deeside Family Centre,<br>Girdleness Road          |
| Burnside Day Centre,<br>Mastrick Drive         |   |  |

3. Accesses to the following Cemeteries and Crematoria:

| Area 2 & 6     | Area 12,18,19,& 24     |
|----------------|------------------------|
| Dyce           | Hazlehead Crematorium  |
| Grove Cemetery | Culter Church Cemetery |
|                | Springbank Cemetery    |
|                | Nigg Church Cemetery   |
|                | Hazlehead Cemetery     |

4. Accesses to the following Shopping Centres

| Area 5 & 8   | Area 7 & 9                  | Area 20            |
|--------------|-----------------------------|--------------------|
| Byron Square | Hayton Road                 | Provost Watt Drive |
| Greenfern    | Tillydrone                  | Kincorth           |
| Cummingspark | Foresterhill Road, Cornhill |                    |

5. Accesses to restaurants, where open, toilets, steps and ramps within the City Council's parks and garden

| Area 13       | Area 17                   |
|---------------|---------------------------|
| Westburn Park | Duthie Park (From Polmuir |
|               | Road Entrance)            |

With the exception of the specific locations detailed above, all other areas in the above categories will receive priority 2 treatment.

The following Multi Storey Blocks are part of the list which will receive priority 2 treatment:

| MULTI-STOREY BLC | OCKS  |   |  |
|------------------|---|---|--|
| Area 8           | Area 7,9,10 & 11  | Area 15 & 20  |  |
| Mastrick Land    | Aulton CourtBalgownie CourtBayview CourtBeachview CourtBeachview CourtCairncry CourtCornhill CourtDenburn CourtDenburn CourtDonside CourtElphinstone CourtGilcomstoun LandGreig CourtHutcheon CourtInverdon CourtKings CourtLinksfield CourtMarischal CourtNorthsea CourtOldcroft Court | Bruce House<br>Davidson House<br>Grampian Court<br>Kincorth Land<br>Morven Court<br>Rose House<br>Wallace House |  |
|                  | Porthill Court<br>Promenade Court<br>Regent Court<br>Rosehill Court<br>Seamount Court<br>St Machar Court<br>St Ninian Court<br>Stockethill Court<br>Thistle Court<br>Tillydrone Court<br>Virginia Court   |   |  |

### OPERATIONAL PLAN APPENDIX D – STOCK AND TREATMENT GUIDANCE

## (a) Community Grit/Salt Bins.

Small quantities of salt (for use on the public roads and footpaths) are available free of charge to members of the public, subject to them supplying a suitable container and shovel, from the community grit bins sited at the following location.

| COMMUNITY                       | ADDRESS OF COMMUNITY<br>BIN LOCATION             | DETAILED LOCATION                            |
|---------------------------------|--|--|
| Bridge of Don                   | Park and Ride                                    | In south car park.                           |
| City Centre -                   | Near St John's Place, junction.                  | Next to recycling point.                     |
| Crown Terrace                   | _  |  |
| City Centre -<br>Justice Street | Near Recycling Point                             | Next to recycling point.                     |
| City Centre -                   | Union Row, Aberdeen,                             | Opposite Investment house.                   |
| Kidd Street                     | AB10 1SA   | opposite investment house.                   |
| Countesswells                   | Near number 210                                  | Setted surface near number 210               |
| Road                            |  |  |
| Cove                            | Loirston Close                                   | Public House car park                        |
| Craibstone                      | Park and Ride                                    | At entrance to south carpark                 |
| Danestone                       | Laurel Drive, AB22 8HB                           | Tesco car park – next to recycling           |
|                                 |  | facilities                                   |
| Dyce                            | Netherview Avenue Dyce,<br>Aberdeen, AB217NG     | Asda car park – Next to recycling facilities |
| Garthdee                        | Garthdee Road, Aberdeen, AB107QA                 | Asda car park – Next to recycling facilities |
| Kingswells                      | Park and Ride                                    | Next to recycling point and bins             |
| Mastrick                        | Fernhill Drive, AB16 6QT                         | Near junction with ernhill Road              |
| Northfield                      | Byron Square, Aberdeen,<br>AB16 7LL              | Byron Square next to bins in carpark         |
| Peterculter                     | Johnston Gardens North.<br>Peterculter, AB14 0LD | At turning area near number 129              |
| Regent Walk                     | Near Regent Court                                | Regent court carpark, near entrance          |
| Rosemount                       | 65 Leadside road, Aberdeen, AB25 1RX             | Outside 65 Leadside road next to bins        |
| Seaton Drive                    | Near King Street Junction                        | Carpark on entry to Seaton Walk              |
| Tillydrone                      | Pennan Road, Aberdeen,<br>AB24 2UD               | Opposite family centre / library             |
| Torry                           | Girdleness Road                                  | Layby opposite 223 Girdleness Road           |
| Woodside                        | Anderson Road, Aberdeen,                         | At the top of Anderson Road, next to         |
|                                 | AB24 4NS   | Stewart Park                                 |

# (b) – Decision Making Treatment Matrix – Precautionary Treatments

### WINTER TREATMENT SPREAD RATE MATRIX SCOTS WINTER SERVICE SUBGROUP ADVICE

|                 |   | Variation of V  | Vell Maintained H                                     | ighways Appendix                                   | H - September 2013                             |  |   |
|-----------------|---|---|---|--|--|--|---|
|                 |   | Column C  | Column D  | Column G   | Column H                                       | Column K   | Column L  |
|                 | Precautionary<br>Treatment for<br>frost / ice   | Poor Cover<br>medium<br>Traffic<br>Normal<br>Loss                       | Poor Cover<br>medium<br>Traffic High<br>Loss          | Fair Cover<br>medium Traffic<br>Normal Loss        | Fair Cover medium<br>Traffic High Loss         | Good<br>Cover<br>medium<br>Traffic<br>Normal<br>Loss | Good Cover<br>medium Traffic<br>High Loss         |
| Dry Salt        | RST at or<br>above -2<br>Degrees and<br>damp road                                       | <mark>10</mark> (8)   | 10(8)   | 10(8)  | 10(8)  | 10(8)  | 10(8)   |
| Pre-wet<br>Salt | conditions<br>Table H9 of<br>Code - where<br>the road<br>surface is dry<br>no action is | 10(8)   | 10(8)   | 10(8)  | 10(8)  | 10(8)  | 10(8)   |
| Treated<br>Salt | no action is<br>needed even<br>when<br>conditions are<br>below zero                     | 10(7)   | 10(7)   | 10(7)  | 10(7)  | 10(7)  | 10(7)   |
| Dry Salt        |   | <mark>15(</mark> 13)  | 20(16)  | 10 or 15(11)                                       | 15(13)   | 10(8)  | 10  |
| Pre-wet<br>Salt | RST at or<br>above -2<br>Degrees and<br>wet road<br>conditions                          | 15(12)  | 15(14)  | 10(10)   | 15(12)   | 10(8)  | 10(9)   |
| Treated<br>Salt |   | 10(10)  | 10 or 15(11)  | 10(8)  | 10(10)   | 10(7)  | 10(7)   |
| Dry Salt        | RST below -2<br>deg C and<br>above -5 deg C<br>and damp road<br>conditions              | <mark>15 or 20</mark> (17)  | 20  | 10 or 15(14)                                       | 20(17)   | 10 or<br>15(11)                                      | 15(13)  |
| Pre-wet<br>Salt |   | 15 or 20(16)  | 20(18)  | 15(14)   | 15(16)   | 15(11)   | 15(12)  |
| Treated<br>Salt |   | 15(12)  | 15(14)  | 10 or 15 (11)                                      | 15(12)   | 10(8)  | 10(10)  |
| Dry Salt        | RST below -2<br>deg C and<br>above -5 deg C<br>and wet road<br>conditions               | <mark>1 x 20 then</mark><br>monitor &<br>treat as<br>required(2x1<br>7) | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x20) | 1 x 20 then<br>monitor & treat<br>as requ'ed(2x28) | 1 x 20<br>thenmonitor&treatas<br>requ'ed(2x17) | 20(20)   | 1 x 20 then<br>monitor & treat<br>as required(25) |

|                 | -  |   |   |  |  |  |  |
|-----------------|--|---|---|--|--|--|--|
| Pre-wet<br>Salt |  | 1 x 20 then<br>monitor &<br>treat as<br>required(2x1<br>6)  | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x18) | 1 x 20 then<br>monitor & treat<br>as requ'ed (27)  | 1 x 20 then monitor<br>& treat as<br>requ'ed(31)   | 1 x 20<br>then<br>monitor &<br>treat as<br>requ'ed(21<br>)   | 1 x 20 then<br>monitor & treat<br>as required(24)      |
| Treated<br>Salt |  | 1 x 20 then<br>monitor &<br>treat as<br>required(24)        | 1 x 20 then<br>monitor & treat<br>as requ'ed(28)      | 1 x 20 then<br>monitor & treat<br>as requ'ed (21)  | 1 x 20 then monitor<br>& treat as<br>requ'ed(24)   | 1 x 20<br>then<br>monitor &<br>treat as<br>requ'ed(16<br>)   | 1 x 20 then<br>monitor & treat<br>as required(19)      |
| Dry Salt        |  | 1 x 20 then<br>monitor &<br>treat as<br>required(2x1<br>6)  | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x19) | 1 x 20 then<br>monitor & treat<br>as requ'ed(27)   | 1 x 20<br>thenmonitor&treatas<br>requ'ed(2x16)     | 20   | 1 x 20 then<br>monitor & treat<br>as required(24)      |
| Pre-wet<br>Salt | RST at or<br>below -5 deg C<br>and above -10<br>deg C and<br>damp road<br>conditions | 1 x 20 then<br>monitor &<br>treat as<br>required(2x1<br>6)  | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x18) | 1 x 20 then<br>monitor & treat<br>as requ'ed(27)   | 1 x 20 then monitor<br>& treat as<br>requ'ed(31)   | 1 x 20<br>then<br>monitor &<br>treat as<br>requ'ed(21<br>)   | 1 x 20 then<br>monitor & treat<br>as required(24)      |
| Treated<br>Salt |  | 1 x 20 then<br>monitor &<br>treat as<br>required(23)        | 1 x 20 then<br>monitor & treat<br>as requ'ed(27)      | 1 x 20 then<br>monitor & treat<br>as requ'ed (20)  | 1 x 20 then monitor<br>& treat as<br>requ'ed(23)   | 1 x 20<br>then<br>monitor &<br>treat as<br>requ'ed(15<br>)   | 1 x 20 then<br>monitor & treat<br>as required(18)      |
| Dry Salt        |  | 1 x 20 then<br>monitor &<br>treat as<br>required(32)        | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x39) | 1 x 20 then<br>monitor & treat<br>as requ'ed(2x27) | 1 x 20<br>thenmonitor&treatas<br>requ'ed(2x32)     | 1 x 20<br>thenmonit<br>or&treatas<br>requ'ed(2x<br>20)       | 1 x 20 then<br>monitor & treat<br>as<br>required(2x24) |
| Pre-wet<br>Salt | RST below -5<br>deg C and<br>above -10 deg<br>C and wet road<br>conditions           | 1 x 20* then<br>monitor &<br>treat as<br>required(2x3<br>1) | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x36) | 1 x 20 then<br>monitor & treat<br>as requ'ed2x(27) | 1 x 20 then monitor<br>& treat as<br>requ'ed(2x31) | 1 x 20<br>then<br>monitor &<br>treat as<br>requ'ed(2x<br>21) | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x24)  |
| Treated<br>Salt |  | 1 x 20 then<br>monitor &<br>treat as<br>req'red(2x23<br>)   | 1 x 20 then<br>monitor & treat<br>as<br>requ'ed(2x27) | 1 x 20 then<br>monitor & treat<br>as requ'ed(2x20) | 1 x 20 then monitor<br>& treat as<br>requ'ed(2x23) | 1 x 20<br>then<br>monitor &<br>treat as<br>requ'ed(30<br>)   | 1 x 20 then<br>monitor & treat<br>as<br>required(2x18) |

Key:

() = Appendix H recommendations

- a. The treatment matrix assumes no residual de-icing material on the carriageway. The presence of residual de-icing material will be taken into account and spread rates adjusted in preparing proposed action plans. Evidence of residual salt should be based on IPS sensor/camera feedback or visual inspection.
- b. Particular attention should be given to possibility of water running across carriageways and other surfaces e.g., off adjacent fields after heavy rains, washing off previously deposited salt. Such locations should be closely monitored and may require further treatments
- c. If rain is forecast to fall on frozen surfaces then treatment should take place on the dry roads prior to the commencement of the rain and again during the rainfall until

temperatures are above  $0^{\circ}$ C, subject to being completed within the council's hours of cover.

d. Salt is less effective when road temperatures are below –5°C. However salt and grit may be used on sheet ice or hard-packed snow when temperatures are exceptionally low. Where hard packed snow and ice have formed and cannot be removed by ploughing, a salt sand mix can be used in successive treatments at a spread rate of 20 – 40 g/sqm. This aids vehicle traction and acts to break up the snow and ice.

| Salt Type    | Precautionary<br>Treatments Before<br>Snow or Freezing<br>rain | Light or Medium<br>Traffic         | Heavy Traffic      |  |
|--------------|--|------------------------------------|--------------------|--|
| Dry Salt     | Light Chow   | 20g/m <sup>2</sup>                 | 20g/m <sup>2</sup> |  |
| Pre-wet Salt | Light Snow<br>Forecast <10mm                                   | 20g/m <sup>2</sup>                 | 20g/m <sup>2</sup> |  |
| Treated Salt | rolecast < lollin  | 15g/m <sup>2</sup>                 | 15g/m <sup>2</sup> |  |
| Dry Salt     | Moderate/Heavy   | 20g/m <sup>2</sup>                 | 40g/m <sup>2</sup> |  |
| Pre-wet Salt | Snow Forecast  | 20g/m <sup>2</sup>                 | 40g/m <sup>2</sup> |  |
| Treated Salt | >10mm  | 15g/m <sup>2</sup>                 | 30g/m <sup>2</sup> |  |
| Dry Salt     | Freezing roin  | 1 x20g/m <sup>2</sup> then moni    | tor                |  |
| Pre-wet Salt | Freezing rain<br>Forecast                                      | 1 x20g/m <sup>2</sup> then monitor |                    |  |
| Treated Salt | FUIECasi   | 1 x15g/m <sup>2</sup> then monitor |                    |  |
|              |  |                                    |                    |  |

### (c) Precautionary Treatment Matrix for Snow Conditions

### (d) Reactive Treatment Matrix for Ice and Compacted Snow Conditions

| Non – Precautionary/Reactive Treatments of Snow/Ice     |                                |  |  |  |
|---|--------------------------------|--|--|--|
| During snowfall   | Salt - 20g/m <sup>2</sup>      |  |  |  |
| Thin layers of Ice<br>< 1mm RST above -5C               | Salt - 20g/m <sup>2</sup>      |  |  |  |
| Thin layers of Ice<br>< 1mm RST below -5C               | Salt - 20g/m <sup>2</sup>      | Consider using Mixtures<br>– 20-40g of Sand/Salt |  |  |
| Thin layers of compacted snow/ice up to 5mm thickness.  | Mixtures – 20-40g of sand/salt |  |  |  |
| Layer of compacted snow/ice greater than 5mm thickness. | Mixtures – 20-40g of sand/salt | Consider using sand only.                        |  |  |

# (e) Appropraite Salt and Grit Stock Levels

Salt stocks Winter Period Core Winter Period Days Resilience (Overall Winter Period) Days resilience (Core Winter Period)

1st October to 30th March 1st November to 1 March 9 days 15 days

|           | Non-Winter stock |      | Non-Core Winter Period |       | Core Winter Period |       |
|-----------|------------------|------|------------------------|-------|--------------------|-------|
| Depot     | Min              | Max  | Min                    | Max   | Min                | Max   |
| Tonnage   |                  |      |                        |       |                    |       |
| Bucksburn | 2000             | 4000 | 3000                   | 10000 | 3500               | 10000 |
| Tullos    | 0                | 250  | 400                    | 1000  | 500                | 1000  |
| Culter    | 0                | 100  | 250                    | 500   | 250                | 750   |
| Total     | 2000             | 4350 | 3650                   | 11500 | 4250               | 11750 |

Application of resilience measures to be considered at the following stock levels.

| All depots | Non-Winter stock | Non-Core Winter Period | Core Winter Period |
|------------|------------------|------------------------|--------------------|
| Tonnes     | N/A              | 2690                   | 4485               |

The service is to have access to 200 tonnes of grit during the core winter period.

Mutual aid in salt supply and other aspects of winter service and contingency arrangements in advance, are in place through the Salt Cell Group. The 32 Scottish Councils are represented on this group through SCOTS, SOLACE and COSLA. Salt Cell is monitoring salt restock for winter 2019/20.