ScotlandTranServ
A Balfour Beatty Mouchel Joint Venture

WINTER SERVICE PLAN

1st October 2019- 15th May 2020

4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network

SOUTH WEST UNIT

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	BEAR, North West Unit	Bear House, Inveralmond
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1.0 MANAGEMENT ARRANGEMENTS

1.1 Winter Service Manager (WSM)

The strategic management of the information gathering and decision making process will be undertaken by our WSM. The name, qualifications, experience and responsibilities of the WSM are shown below.

Name	Role	Qualifications	Responsibilities
	Winter Service Manager	Met Office; IHE Winter Service Training for Decision Makers and Managers, winter scenario training; 11 years' experience	As detailed in WSP Section 4.1

1.2 Winter Service Duty Officers (WSDO)

1.2.1
The daily decision making process will be proposed by a limited number of very experienced Duty Managers who have previously undertaken the role of WSDO, on a rota basis.

Name	Role	Qualifications	Responsibilities
	Area Network Manager	MeteoGroup 2013; 23 years' experience	As detailed in WSP Section 4.2
	Area Network Engineer	MeteoGroup 2014; 17 years' experience	As detailed in WSP Section 4.2
	Area Network Engineer	Met Office 2004; 14 years' experience	As detailed in WSP Section 4.2
	Area Network Engineer	MeteoGroup 2016; 13 years' experience	As detailed in WSP Section 4.2
	Area Network Engineer	MetOffice 2005: 9 years' experience	As detailed in WSP Section 4.2

1.2.2
The role of WSDO will be undertaken by staff identified below on a rota basis. They will be located within the Control Room at Polmadie whenever winter service operation are planned, and will check and approve the proposed daily action plan.

Name	Role	Qualifications	Responsibilities
	Duty Officer	IHE Winter Service Training for Decision Makers and Managers 2017	As detailed in WSP Section 4.2
	Duty Officer		
	Duty Officer	IHE Winter Service Training for Decision Makers and Managers 2016	
	Duty Officer	MeteoGroup 2014; IHE Winter Service Training for Decision Makers and Managers 2015	
	Duty Officer		
	Duty Officer		
	Duty Officer		

1.3 Monitoring Arrangements

WSDO listed in section 1.2.2 will undertake the monitoring process from the Control Room during the period from 1st October to 15th May. All systems used are internet based and all WSDOs will be able to access the packages from any internet enabled computer. The WSDOs will be available to take winter maintenance related calls during the day or night.

Should the WSDO require any assistance, the matter can be referred to the rostered Duty Manager identified in 1.2.1 above.

In the event of a power failure in the Control Room the WSDO will contact the On Call Senior Manager by mobile telephone. Monitoring of actual road conditions from road sensors will be carried out by MeteoGroup until power has been restored to the Control Room.

The WSDO contact is the 24 hour Control Room number **0141 218 3999.**

1.4 Personnel Resources

Sufficient resources will be made available, through existing trained and experienced staff and our proactive recruitment procedures, to enable us to comply with driver hours regulations and the working time directive and to operate 24 hour working in exceptionally severe weather conditions.

Scotland TranServ's fleet management team will ensure that all vehicle maintenance schedules are adhered to and that all repairs and faults are notified to the WSM and rectified promptly. Sufficient fitters are available on call out to assist in repairs.

The names of the duty Supervisors and Operatives are shown in Appendix 6 of this Winter Service Plan (WSP). A separate rota of appropriate participants will be drawn up to cover any anticipated attendance at the Multi Agency Response Team (MART).

1.5 Call Out Arrangements

The decision to carry out treatment will be made by the Duty Manager. The WSDO who will instruct the duty Supervisor to mobilise resources, as shown in Figure 1/1. The duty Supervisor will then telephone the drivers with their instructions. These arrangements will remain the same regardless of working hours. A roster of operatives will be held at the Central Office and the depots, and will be updated by the Operations Manager as appropriate.

Mobilisation for a planned response will allow these treatments to commence at the prescribed time, ensuring completion before the predicted onset of snow or ice conditions. Mobilisation for an immediate response will be such that mobilisation will be completed and treatment commenced within one hour of the decision having been made. To supplement these mobilisation times, if an item of front line winter constructional plant breaks down, an item of reserve plant will be mobilised and commence treatment within one hour of the breakdown.

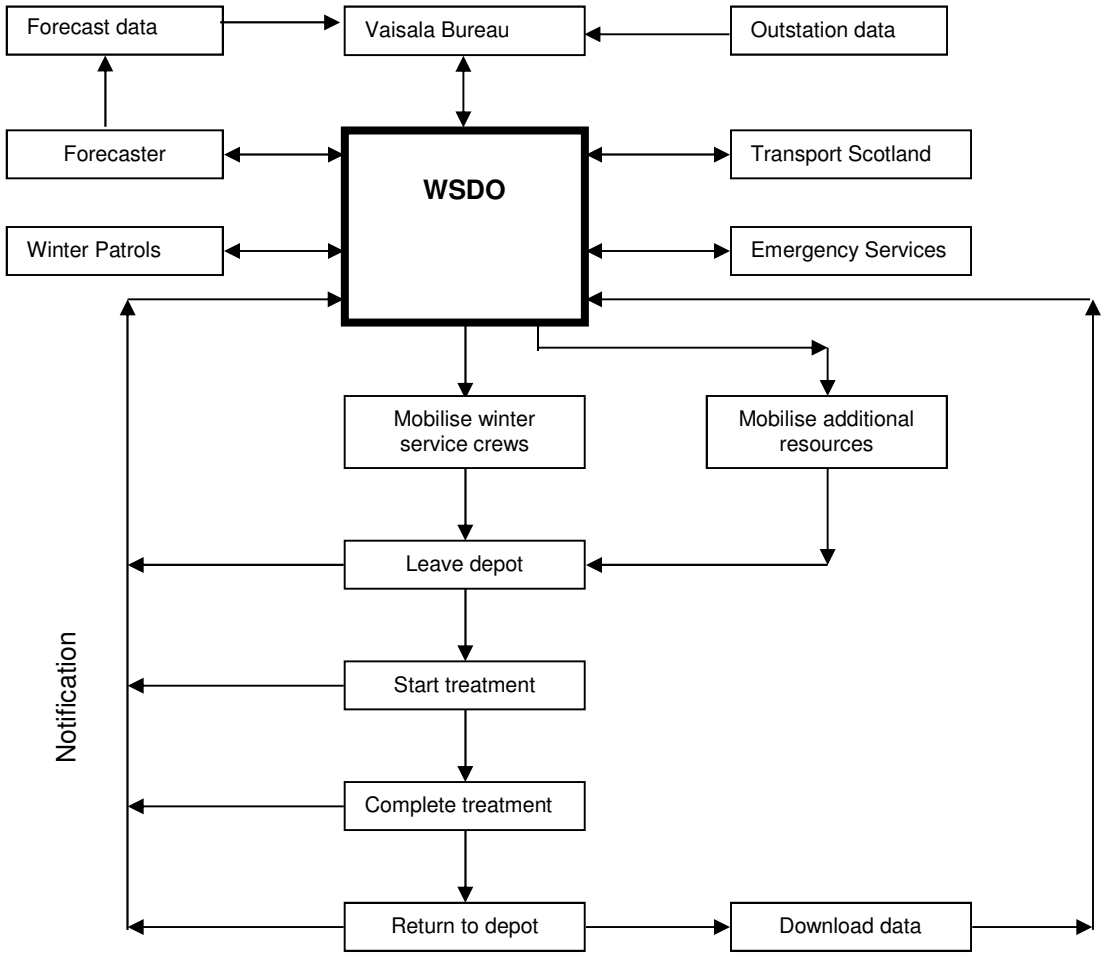


Figure 1/1: Call Out Procedure

1.6 Communication Equipment

All front line and reserve winter service plant will be fitted with "hands-free" cellular telephones and operatives will be trained in its effective use. Contact with staff during and outside normal work hours will be made by mobile telephone, with the relevant responsible staff operating on a roster basis. Any faults in the communication system will be reported to the duty Supervisor who will instigate any repairs necessary.

Patrol vehicles will be fitted with AIRWAVE communications, and the Control Room will have a base unit to allow communication between the drivers and WSDO.

1.7 Training for Managers and Other Staff

The WSM and WSDO have received training in Basic Road Meteorology, provided by the forecast provider, including the use and interpretation of the Forecasting Service and the Ice Prediction System. New personnel will receive this training and "shadow" an experienced WSDO before being proposed to Transport Scotland for WSDO duties. WSDO listed in Section 1.2.2 have received IHE Winter Services Decision Makers training.

Drivers will be trained in Winter Maintenance to City and Guilds or SVQ standard. Lists of qualified drivers are included at Appendix 6.

Attendants for the MART will receive training deemed appropriate by Transport Scotland.

2.0 WEATHER FORECASTING

2.1 Purpose

The purpose of the weather forecasting service is to produce accurate information to allow the Duty Manager and WSDO to plan winter service operations for the following 36 hour period, allowing the safe movement of trunk road users and minimising delays caused by snow and ice. The service permits the WSDO to contact MeteoGroup for advice or updated information on a 24/7 basis should they have specific concerns, allowing for a proactive approach to winter service.

2.2 Methodology

Our weather forecasting service provider, MeteoGroup, will utilise information from the existing road sensor network, to give detailed route based forecasts for each route and section within the Unit. Facilities will also be provided in order that information from Scottish Weather Radar and thermal mapping, when updated, can be utilised to give accurate information on existing and anticipated conditions.

2.3 Weather Forecasting Service

Scotland TranServ will use the expert weather forecasting services provided by the MeteoGroup RoadMaster system. MeteoGroup weather forecast contact details are:

MeteoGroup Forecaster
MeteoGroup back up forecaster, (24 hours)

The forecast service will be available throughout the period 1st October to 15th May, although outside this period a road danger warning service will be in place.

Throughout the winter period, forecast information will be uploaded to a computerised Ice Prediction system accessed by our trained and experienced WSDO from any internet linked computer either directly from the MeteoGroup RoadMaster website, or through the Vaisala Bureau. The daily forecast information issued by the RoadMaster system will include:

- 36 hour route based forecasts for each route within the unit with expected minimum road surface temperatures and weather hazards, issued by 1300 hours daily,
- Site specific forecast graphs showing the minimum road surface temperature and air temperature,
- Text information forecasting weather conditions and minimum road surface temperatures predicted over the coming 2 to 5 days,
- Routine weather forecast updates unit with expected minimum road surface temperatures and weather hazards.
- Updated forecasts when particular thresholds are likely to be exceeded.

Regular communication is vital when managing changes in weather conditions, enabling us to continually review our planned actions and react promptly when necessary. The MeteoGroup Duty Forecaster will liaise by telephone with our WSDO advising whenever non-routine amendments to the site-specific forecasts graphs and revisions to the 36 hour forecast have been made when the Forecaster expects there to be:

- a deterioration in the forecast road surface state from no-frost to frost, on either the 36 hour forecast or any of the site specific forecast graphs,

- an improvement in the forecast road surface state from frost to no-frost, on either the 36 hour forecast or on any site specific forecast graphs,
- a difference of at least two hours between the original forecast time and the revised time for the onset of freezing conditions, except where a precautionary treatment has already commenced, or is planned to commence prior to the onset of freezing conditions, and no precipitation is forecast for the intervening period,
- snow, ice, hoar frost or freezing rain in the original forecast now not expected,
- a change in the timing of rainfall such that rain is now expected after the planned time for precautionary treatment, or
- a change in the amount of snow from light to moderate or from moderate to heavy, where light is less than 3cm, moderate is 3 to 10cm and heavy is greater than 10cm.

Notwithstanding the above, the MeteoGroup Duty Forecaster will immediately telephone our WSDO, to advise them of deterioration in the prevailing weather and surface conditions when the actual road surface temperature on any site specific forecast graph falls to 0°C or lower, which had not been forecast beforehand.

The MeteoGroup Duty Forecasters are on hand at all times to offer assistance and advice. The WSDO will record the receipt of verbal updated forecast information provided by the MeteoGroup.

Regular meetings will be held between Scotland TranServ and MeteoGroup to discuss the forecast accuracy and level of service provided by MeteoGroup.

Scotland TranServ will also sign up to receive Met Office weather warning alerts for ice, snow, heavy rain and strong winds throughout the year. Current weather warnings will be include in the Scotland TranServ Daily Action Plan.

2.3.1 *Climatic Domains*

As with the previous three winters, route based forecasts will be utilised instead of forecasts which are based on climatic domains. These give more specific data on forecast road surface temperatures and surface state conditions along the length of a route, taking into account local topography, alignment and sky view factor.

This format allows tailored precautionary treatments to be planned, along individual routes and sub-routes addressing local climatic needs for each route, and delivering a more sustainable winter service.

2.3.2 *Weather Radar*

Access to weather radar information will be available to the WSDO over the internet, allowing our WSDO to track the progress of precipitation, to assist in timing of precautionary action and to give the duty Supervisor maximum warning of the arrival time of inclement weather, to permit resource mobilisation.

2.3.3 *Ice Sensors & Forecast Sites*

Ice prediction and forecast sites are installed at the locations detailed in section 14.1 of this WSP.

Information from these sites will be used to predict trends in weather and road conditions, and to monitor actual conditions, with sensors being polled at 20 minute intervals between 1st October and 15th May. Information in real time from the mobile sensors fitted to the front line vehicles will also be used to monitor trends in weather and road conditions.

Detailed inspections and calibration checks on ice prediction and forecast sites will be carried out by Vaisala, in accordance with the manufacturers' recommendations, twice per year during August to September and during December to February.

The WSDO will be responsible for notifying all ice prediction and forecast site faults to Vaisala and ensuring that repair is carried out within the required timescale.

2.3.4 *Thermal Mapping*

Thermal mapping, which covers the entire network, may be used as an additional tool in the decision making process for precautionary treatment, although its use is largely superseded by the introduction of route based forecasts. MeteoGroup also have access to digitised thermal maps, which may assist the forecaster in making predictions of minimum road surface temperatures.

2.4 Computer Systems

The computerised road weather information system will obtain, interpret and display the following, in a manner which predicts trends in weather and road conditions:

- Road sensor data (forecast & actual)
- Thermal maps, where made available by the Director
- Weather data
- Other relevant information

Within the system, an automatic audible alert has been incorporated, which will alert the WSDO when a road sensor surface temperature falls to +1°C, and enures that road surface conditions are reviewed. A number of weather stations have had cameras added to them and these images will be available to the WSDO together with some of Traffic Scotland's camera images, to assist in real-time monitoring of weather and road surface conditions.

The weather information system will be accessible to MeteoGroup and will be able to accept additional road sensors. The system will have suitable terminals and software, accessible at all times during the Winter Service Period.

2.5 Mobile Sensors

Front line spreaders have been fitted with temperature sensor probes that feed live time information back to a web site that is available to the WSDO. Ayr patrol spreader FM13 DFP has an additional DSP310 sensor fitted.

3.0 MONITORING ARRANGEMENTS FOR AREAS REQUIRING SPECIAL ATTENTION

Areas susceptible to frost and surface water run-off shall be identified and reported by patrol and front line vehicle drivers to the WSM for inclusion in this WSP, and precautionary treatment routes.

These areas include:

- Elevated sections of trunk roads or bridges
- Sections of trunk roads on low ground
- Areas susceptible to water run off or frost hollows
- Different surfacing materials and their susceptibility to various weather conditions

A list of such locations will continue to be developed through time and is included below with treatment arrangements included within Appendix 11. Laminated cards detailing these areas will be held within all winter service vehicles and will be updated during the course of the winter should any amendment be identified.

Road Number	Location
A78	Papermill at Irvine, between Meadowhead and Newhouse Interchange
A898/M898	Erskine Bridge and southbound slip to M8 eastbound
M8	Junction 30 – 31 westbound

Table 7.2 F/1 Frost susceptible areas

Road Number	Location
A701	North of St Annes Bridge
A78	Auchmead road, Greenock
A78	Skelmorlie to Largs at Knock Castle
A78	Barrs Cottage, Inverkip Road, Greenock
A78	Newhouse Interchange to Eglinton
A78	Branchton speed camera, westbound
A78	Westbound off-slip to power station
A78	Car wash at Inverkip Roundabout, eastbound
A78	Bankfoot Roundabout to Dunrod Road
A737	Howood Junction to Belltrees Road
A737	Roadhead Roundabout to Clerksbridge toll
A737	Dalry Rd, Kilwinning
A82	Stoneymollan Roundabout
A82	Dunglass Roundabout to Erskine Bridge
A77	Above and below Bellfield Interchange
A77	South of Ballantrae at the Watertanks
A77	Crossraguel to Dalqhat farm
A77	North of Stena Ferry Terminal
A76	North of Kirkconnel
A76	Kirkconnel south Gateway (adjacent to railway)
A76	Drumlanrig to Enterkinfoot, north of retaining walls
A898	Northbound on slip from A82 Northbound
M8	Eastbound entry to Charing Cross Underpass
M8	Junction 25a Westbound off slip prior to overbridge

Table 7.2 F/2 Water run-off areas

Locations that have been identified as having steep gradients,or sharp bends are tabulated in Table 7.2 F/3 and are further detailed in section 19.1 as areas where salt bins should be provided.

Road Number	Location
M77	Southbound from junction 3 to junction 4
M8/M77	Southbound slip to M77 from M8
M74	Southbound from junction 10 to junction 12
A737	Risk Brae, from Howwood to Roadhead roundabout
A75	The Glen to the west of Dumfries
A75	Glen Luce Bypass
A76	Skerrington roundabout to Templeton Roundabout
A76	New Cumnock to Rigg Farm

Table 7.2 F/3 Gradient Locations

A number of other areas which have been assessed as having some similar criteria, but which do not carry the same potential for severe disruption are listed in Table 7.2 F/4 below.

Road Number	Location
A701	Mollinburn
A701	Ae Bridge
A75	Ramhill, east of Castle Douglas
A75	Gatehouse of Fleet By-pass
A76	Thornhill South Gateway
A76	Crosshands to Mauchline
A77	Ayr to Girvan and Ballantrae
A78	Meadowhead Roundabout
A8	Greenock
M74	Junction 7 Larkhall to Junction 8 Canderside

Table 7.2 F/4 Other Locations

4.0 DECISION MAKING

4.1 Role of the WSM

The WSM will be responsible for ensuring delivery of the specified winter maintenance operations and will appoint WSDO who will work to an agreed roster.

4.2 Role of the WSDO

The WSDO will be responsible for:

- Receiving and interrogating the weather forecast information (carried out by Duty Manager),
- Deciding, recording and instructing treatment based on the forecasts provided by the MeteoGroup and local information such as the levels of residual salt and levels of verge run-off, exercising caution when relying on residual salt when surface state is “Dry” or “Trace” (carried out by Duty Manager),
- Liaison with the Police, neighbouring Local Authorities, motoring organisations and other Operating Companies,
- Monitoring actual conditions and amending proposed actions as conditions dictate,
- Monitoring progress of operations,
- Maintaining communications with Winter Service Operatives, MeteoGroup and the Police, and recording all information in a communications log
- Providing factual information concerning the network to the Police for onward distribution to the media and motoring organisations,
- Keeping records of road conditions and closures, advising the Director and Traffic Scotland Operator immediately of any trunk road blockages,
- Responding to any public enquiries or complaints,
- Advising the WSM on conditions as required,
- Keeping all other records as Appendix 7 of this WSP, and
- Instructing footway clearance as required.

Arrangements to commence winter service will be made daily before 14:00 hours using the weather forecast provided by MeteoGroup and local information such as the levels of residual salt and levels of verge run-off. The decision will be made by the Duty Manager who will instruct the duty Supervisor to mobilise resources, in accordance with Figure 4/1. The Duty Manager will utilise the criteria for minimum precautionary treatment and salt spreading rates, when instructing treatment, as detailed in Figures 4/2 to 4/5.

The decisions will be recorded on the Proposed Action forms and will be issued to the following by 15:00 hours:

- Police Authorities,
- Neighbouring Local Authorities,
- Transport Scotland, uploaded to their portal,
- Performance Audit Group,
- Motoring organisations and
- Other Operating Companies.

To ensure consistency of decisions, The Duty Manager will review the initial decision prior to the instruction being issued. Decisions will be monitored against adjoining Local Authorities or Operating Companies, although care will have to be exercised in this, as there will be different forecast providers and different criteria involved. Decisions will be regularly monitored to include for variations in the forecast weather or to reflect actual conditions on site. Weather radar will be utilised to give the duty Supervisor maximum

warning of the arrival time of inclement weather to ensure timely mobilisation of resources. These decisions will be reviewed on receipt of non-routine weather forecast updates and on reports of actual conditions from Winter Service Patrol drivers.

Decisions will take consideration of areas with negative texture, to ensure treatment will be undertaken as close as is practicable to forecasted time for surface temperatures to be ≤1℃.

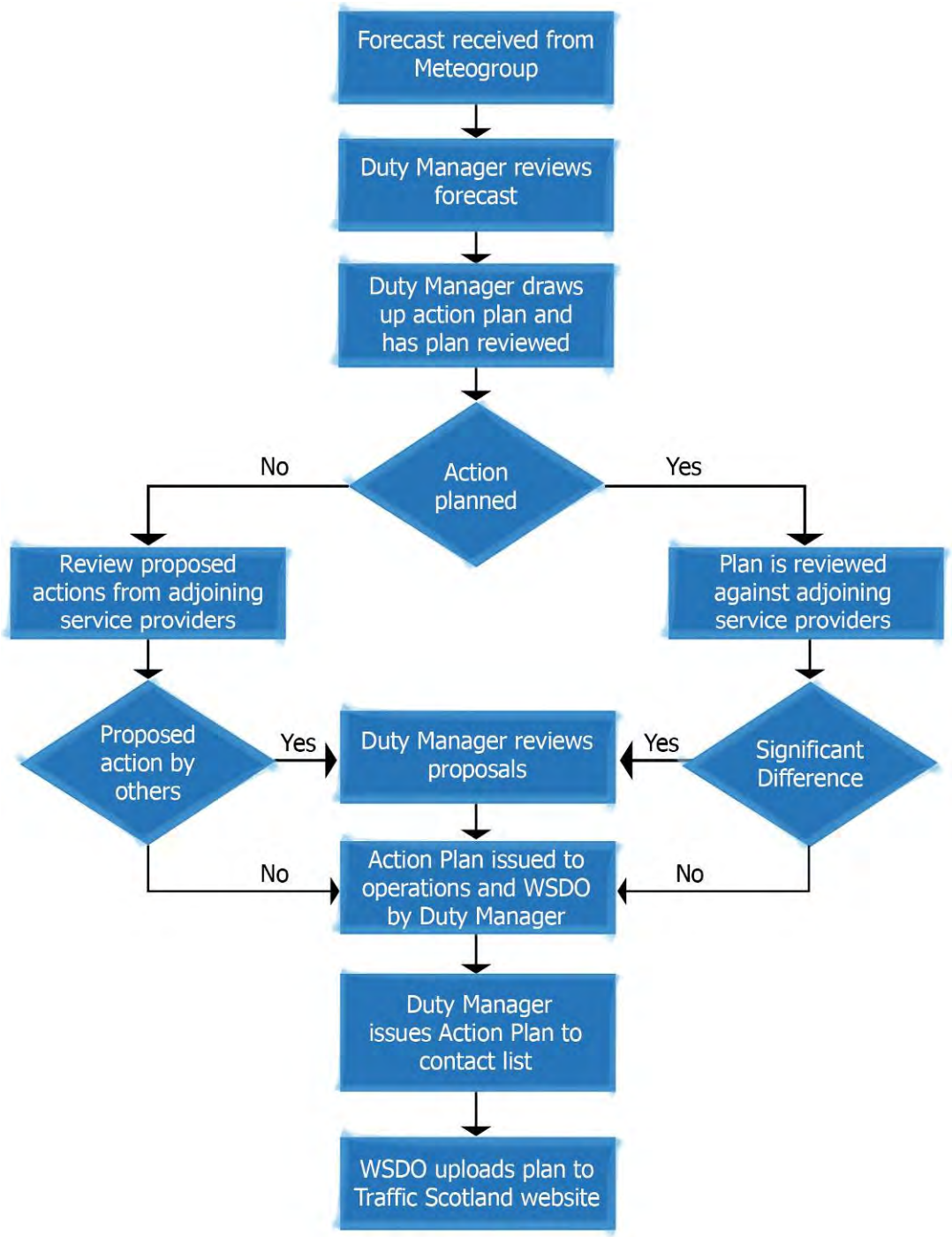


Figure 4/1: Decision Making Process

Decision Matrix			
	Predicted Road Conditions		
Road Surface Temperature	Wet	Wet Patches	Dry
May fall below 1°C	Salt before frost	Salt before frost (see note A)	No action likely, monitor weather (see note A)
Expected to fall below 1°C		Salt before frost (see note B)	
	Salt after rain stops		
	Salt before frost and after rain stops (see note C)		
	Salt before frost		Monitor weather conditions
Expected snow	Salt before snow		
Freezing Rain	Salt before rainfall (see note C)		
	Salt during rainfall (see note C)		
	Salt after rainfall (see note C)		
The decision to undertake precautionary treatments should, if appropriate, be adjusted to take account of residual salt or surface moisture.			
A. Particular attention should be given to any possibility of water running across carriageways and such locations should be monitored and treated as required. B. When a weather warning contains reference to expected hoarfrost considerable deposits of frost are likely to occur and close monitoring will be required. Particular attention should be given to the timing of precautionary treatments due to the possibility that salt deposited on a dry road may be dispersed before it can become effective. C. Under these circumstances rain will freeze on contact with running surfaces and full pre-treatment should be provided even on dry roads. This is a most serious condition and should be monitored closely and continuously throughout the danger period.			

When forecast of Freezing Rain has been issued by forecaster, Appendix 9 should be referred to which gives further guidance on the treatment of Freezing Rain.

Figure 4/2: Decision Matrix

Treatment Matrix Spread rates for precautionary treatments			
	Forecast weather condition	**Frost Susceptible/surface water run-off area (grammes/square metre)**	**Road Surface Wet (grammes/square metre)**
A.	RST higher than plus 1°C	*0*	*0*
B.	RST lower than or equal to plus 1°C but higher than minus 2°C	*10 to 20*	*10 to 20*
C.	RST lower than or equal to minus 2°C but higher than minus 5°C	*10 to 20*	*10 to 20*
D.	RST lower than or equal to minus 5°C	*20*	*20*
E.	RST lower than or equal to plus 1°C but higher than minus 2°C following rain	*20*	*30*
F.	RST lower than or equal to minus 2°C but higher than minus 5°C following rain	*30*	*40*
G.	RST lower than or equal to minus 5°C following rain	*40*	*40*
H.	Hoar Frost	*20*	*20*
I.	Freezing Fog	*10*	*20*
J.	Freezing Rain	*40 (See decision matrix)*	*40 (See decision matrix)*
K.	Snow Accumulations up to 30mm	*30*	*40*
L.	Snow Accumulations over 30mm	*40*	*40*
M.	Hard Packed Snow/Ice	*See clearance matrix*	*See clearance matrix*

Figure 4/3: Salt Spread Rates

Forecast Conditions	Spread Rate (litres/square metre)
Road surface temperature lower than or equal to plus 1℃ but higher than minus 2℃	0.0156
Road surface temperature lower than or equal to minus 2℃ but higher than minus 5℃	0.0312
Frost and road surface temperature lower than -5℃	a minimum of 0.0312 which should be increased with manufacturer's recommendations
Snow	
Freezing conditions after rain	

Figure 4/4: Potassium Acetate Spread Rates

Clearance Matrix			
Minimum Salt Spread rates for Snow or Ice Clearance			
Road Surface Condition	**Treatment**		
	Spreading Salt (grammes/square metre)	**Ploughing**	**Blowing**
Ice Formed	20 to 40	No	No
Snow covering of less than 30mm	20	Yes	No
Snow covering exceeds 30mm	20 to 40	Yes	No
Snow accumulations due to prolonged snowfall	20 to 40	Yes (continuous)	Where applicable
Hard packed snow/ice less than 20mm thick	20 to 40 (successive treatments)	No	No
Hard packed snow/ice	salt/abrasive (successive treatments)	No	No

Figure 4/5: Snow or Ice Clearance Matrix

4.2.1 *Winter Service Patrol mobilisation*

The key routes listed within Figure 4/6 will be patrolled from 1st November until 31st March inclusive when the road surface temperature is to fall to +3℃ or below. Winter Service Patrols will be undertaken in fully loaded salting vehicles to enable timely spot treatment of potentially hazardous conditions as opposed to full blanket precautionary salting.

South West Unit Route	Category
M74 from J 1 (Kingston) to J 12 (Millbank)	A
M77 from M8 (Plantation) to Malletsheugh	A
M8 from Junction 10 to A8 Langbank Roundabout	A
M898 and A898 Erskine Bridge	A
M80 from M8 (Provan) to J 2 (Robroyston)	A
A725/A726 from Whistleberry to East Kilbride at junction with B761	A
A77 from Meiklewood at junction with B7038 to Whitletts Roundabout	A
A78 from Dutch House Roundabout to Pennyburn Roundabout	A
A76 Kilmarnock from junction with A77 to Dumfries at junction with A75	B
A75 Dumfries from junction with A75 to Gretna at junction with A74(M)	B
A77 Girvan from junction with A714 to Stranraer at junction with A75	B
A75 Stranraer from junction with A77 to Gatehouse of Fleet at junction with B796	B
A737 from M8 (St James Interchange) to Kilwinning at junction with A738	B

Figure 4/6: Routes to be patrolled

Those category A sections of the network are to be patrolled, between the hours of 02.00hrs and 10.00hrs, at two hourly intervals, such that each patrol will alternate between a one hour patrol and a one hour stand by, and be able to achieve a maximum of 30

minutes response time during the standby period. These may be stood down prior to 10.00hrs at the direction of the WSDO, if conditions allow.

Category B sections will be patrolled between 00.00hrs and 09.00hrs at three hourly intervals between 00:00 hrs and 03:00 hrs, 03:00 hrs and 06:00 hrs and 06:00 hrs and 09:00 hrs. These may be stood down prior to 09.00hrs at the direction of the WSDO, if conditions allow.

Detailed route based forecasts will allow the WSDO to direct patrol vehicles to concentrate on specific locations at times when conditions require these to be patrolled. This method of forecasting also allows for only partial routes to be patrolled as required.

Vehicles for these routes will be fitted with equipment capable of displaying to the driver an accurate measure of the road surface temperature. This information will also be available to the WSDO on a web based platform to allow him to continue to monitor real time accurate road surface temperatures.

Patrol vehicles are available outwith designated patrol times to respond to snow and ice conditions causing an increased risk of delays and disruption to road users.

4.2.2 *Proposals for precautionary and additional de-icing treatments when low confidence forecasts shall be issued for variable road and weather conditions*

Routes for the precautionary treatment of carriageways and footways are designed to take full account of the following:

- Slip roads
- Hard shoulders
- Hard strips
- Turning lanes
- Central reserve crossovers
- Contiguous lay-bys, and
- Bus bays

All routes are designed to take account of Schedule 7 Part 2 and Schedule 9 Part 1 of the Term Contract, and also take account the location of the relevant loading points and the option of accessing the route at alternative points

If continuous snow is forecast, every effort will be made to ensure enough salt is applied before snow starts to stick to the road, to melt the initial snowfall and to provide a wet surface to facilitate any subsequent necessary snow clearing

Elevated sections of road, including bridges and sections lying in low ground or where the local topography channels windborne cold air, are more prone to freezing and may need special treatment. These areas will be identified from experience, local knowledge and reports from the winter maintenance patrol drivers and included as ARSA.

Decisions on precautionary treatment will be based on the weather forecast provided by the MeteoGroup and local information such as levels of residual salt and levels of verge run-off. Monitoring of actual road surface temperatures in relation to the forecast road surface temperatures will determine the accuracy of the weather forecast, providing additional information for the WSDO to review the treatment requirements. Should the forecast be issued with a low confidence factor, then the Duty Manager will contact the MeteoGroup Duty Forecaster to discuss in greater detail the forecast. Where doubt remains regarding timing or accuracy, the Duty Manager will err on the side of caution when formulating his decision.

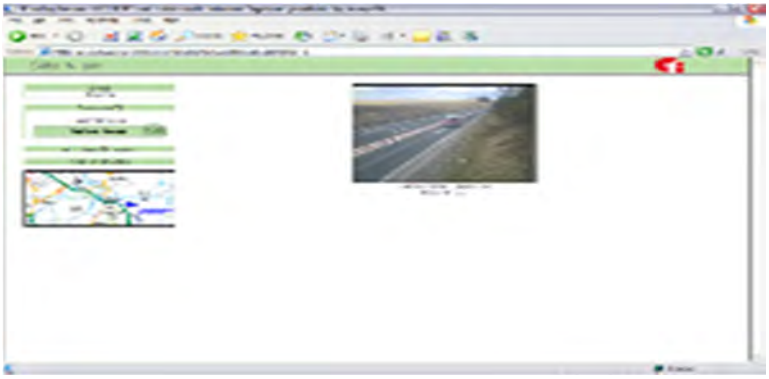


Figure 4/7: Weather Camera

4.2.3 *Proposals for monitoring the effectiveness of de-icing materials*

Following any precautionary treatment, the WSDO will monitor weather forecasts and actual weather conditions to ensure the ongoing effectiveness of the treatment and to instruct further treatment if required. Actual weather conditions will be monitored through Winter Service Patrols, data from the computerised road weather information system, mobile sensors and weather camera sites.

4.2.4 *Road Closure and snow gate operational procedures*

There are currently no snow gates on the South West Unit, but the provision of these will be kept under constant review and, if deemed necessary, recommendations will be made to Transport Scotland. Road closure procedures will also be kept under constant review..

Any decision to close a road will normally be taken by the Police, either directly or in conjunction with Scotland TranServ. Having decided on the need to close a road, the Police will issue instructions to close the road in accordance with their documented Force Orders. This decision will be relayed by the Police to the WSDO in the Control Room or winter service driver on site. The On-Call Senior Manager, WSM, the Director and Traffic Scotland will be informed immediately of any decision to close a road, or of other major problems encountered within the Unit due to winter weather conditions.

The Police will normally notify other EmergencyServices of road closures and will arrange for the provision of advance warning signs and/or activate variable message signs where appropriate. The WSDO will notify relvant Roads Authorities of any trunk road closures.

The WSDO will liaise with and co-operate with the Police to man the closure, if applicable, until a search of the road between the closure points has been undertaken to ensure that no vehicles or personnel are trapped within the length of the closure. Once it has been ascertained that no-one has been trapped within the closure, all Scotland TranServ personnel withdrawn except those involved in the clearance of snow. When it is considered safe to do so, the Police will request Scotland TranServ assistance to open the road. The WSDO shall immediately inform Traffic Scotland and the Director of the road reopening.

In any situation where a section of any trunk road requires to be closed due to weather conditions, the WSDO and ILO should refer to the Assessment and Implementation Procedures for Standard Incident Diversion Routes (SIDR), and record appropriate action in consultion with appropriate Local Authorities regarding the availability of the agreed diversion route.

Scotland TranServ operates a Zero Harm policy in relation to the welfare, health and safety of its employees, and our winter operatives and staff will liaise closely with Police at all times where conditions deteriorate. Decisions to cease or recommence operations will be agreed following consultation between Scotland TranServ and Police Scotland. Scotland

TranServ will contribute through managed risk assessment by trained and experienced operatives and duty staff.

4.2.5 *Hidden Message signs*

Hidden Message Signs will be used to warn the Trunk Road user of:

- Adverse Road conditions,
- Roads Closed, and
- Diversions

The Police will be advised of adverse conditions, snow ploughing and treatments. The Hidden Message Signs will be used after consultation with the Police to close roads. Scotland TranServ will operate this function.

Locally based Network Management staff will carry out detailed inspections of these signs prior to the winter period.

Details and locations of these signs are shown in Figure 4/8.

Road No.	Location	Detailed Description
M74	Junctions 8 to 9 S/B	Hidden Message Sign 0.5 miles prior to Jct 9
M74	Junctions 10 to 11 S/B	Hidden Message Sign 0.5 miles prior to Jct 11
A725	Crossbaskets	Ice Warning Signs
A701	St Annes	Ice Warning Signs

Figure 4/8: Details of Hidden Message Signs

5.0 LIAISON

5.1.1 *The Director*

The Director will receive a copy of the agreed WSP. Remote access to electronic records will be provided to the Director and Performance Audit Group.

Prior to 31st May each year, we will submit an annual Winter Service Report to the Director, forming a review of the previous Winter Service Period. We will attend an annual review meeting with the Director, to consider the findings of the Winter Service Report. This meeting will take place 14 days after the submission of each annual Winter Service Report.

5.1.2 *The Police*

Copies of this WSP will be provided to Police Scotland. The WSDO will advise Police Scotland of the proposed actions by 1500 hours each day.

Our WSM will arrange an annual meeting with relevant senior police officers prior to the start of the winter season to review the detailed liaison and communication systems for the impending winter season. A further meeting will take place at the end of each winter season to review performance and the effectiveness of procedures for dealing with the actual weather conditions.

Police Scotland officers on the network will be requested to report any local adverse conditions to ScotlandTranServ in order that resources can be deployed and appropriate action taken.

In the event of severe weather conditions, Police assistance may be requested when moving winter equipment, arranging for any required road closures or for dealing with abandoned vehicles. In difficult conditions, and when requested, a Police presence may be requested to accompany snow clearing plant until a reasonable passage for traffic has been obtained. The WSDO will request a police presence from the appropriate Police Control Room. The Police will be advised of any commencement of snow ploughing operations and activation of warning signals requested. The use of Traffic Scotland signs where appropriate will also be requested.

Name	Position	Location	Office
Police Scotland	Operational Support Inspector	Force Overview, Helen St, Glasgow G51 3HH	101
Campbell Moffat	Road Policing	01387 242208	0845 005701
Michael McDonald	Road Policing	01387 242365	0845 005701

5.1.3 *The Traffic Scotland Operator*

The WSDO will advise the Traffic Scotland Operator of the proposed actions by 1500 hours each day. The use of Traffic Scotland signs, where appropriate, will also be requested. Information regarding adverse weather affecting the trunk road will also be provided as appropriate. The WSDO, the Incident Liaison Officer and the Police will feed this information to Traffic Scotland.

5.1.4 *Adjacent Road and Highway Authorities*

Prior to the start of the winter maintenance period Scotland TranServ liaise with adjoining Local Authorities to ensure that there is complete coverage of the network and adjacent roads. Copies of this WSP will be provided to relevant Local Authorities. Proposed winter treatment actions will be forwarded to the Winter Maintenance Controller, or nominated contact person, of adjacent authorities as soon as decisions are made following receipt of the mid-day forecast. Transmittal, usually by e-mail, shall be recorded.

Council	Name	Position	Contact Numbers	
			Office	Mobile
North Lanarkshire				
	Call Centre		01698 403110	
Dumfries & Galloway				
	Contact Centre		0303 333 3000	
South Lanarkshire				
			0800 242024	
Ayrshire Roads Alliance South Ayrshire				
	Contact Centre		0300 123 0900	
Renfrewshire				
	Contact Centre		0300 300 0144	
East Renfrewshire*			0141 577 3417	
Inverclyde				
			01475 714 779	
Ayrshire Roads Alliance East Ayrshire				
	Outwith working hours		0845 7240000	
North Ayrshire				
	Outwith working hours		01294 310000	
West Dunbartonshire*			01389-737632	
Glasgow City*		Roads & Lighting Manager	0141 287 9169	

*Outwith office hours, contact RALF 0800 373 635

5.1.5 *Adjacent Trunk Road Operating Companies and DBFOs*

Copies of this WSP will be provided to the adjacent Trunk Road Operating Companies and DBFOs (OCs). The WSDO will advise the relevant OCs by e-mail of adverse weather forecasts and of proposed winter actions by 1500hrs each day. Copies of adjacent OC WSP will be held in our Central Office and assessed for compatibility with our own WSP, specifically at Unit boundaries. Treatment across operational boundaries will be co-ordinated as far as possible to ensure a continuity of safe conditions for road users.

Area	Company	Location	Telephone Nos.	
			Office	Mobile
M74/M73/M8 DBFO	SRP	Precision House,McNeil Drive, Eurocentral, Motherwell ML1 4UR	01698 730200	
North West Unit	BEAR Scotland	BEAR House, Inveralmond Road, Perth PH1 3TW	01738 455200	
M6 DBFO	AUTOLINK	Nethercleugh Lockerbie	01576 205 200	
M77 DBFO	Connect Road Operators	Maidenhill, Glasgow	0141 639 8638	
M80 DBFO	BEAR Scotland	Chryston Depot, Auchenguich Rd Chryston G69 0JL	01738 481212	
No operational boundary	Amey	6a Dryden Road, Bilston Glen Ind Est, Loanhead EH20 (LZ.	0131 440 8430	

5.1.6 *Network Rail*

Copies of this WSP will be provided to Network Rail The WSDO will advise Network Rail of the proposed actions by 1500 hours each day.

Our WSM will Invite Network Rail to an annual meeting at the end of each winter season to review performance and the effectiveness of procedures for dealing with the actual weather conditions, and any lessons learned will be incorporated in the updated WSP produced that summer.

There are no railway level crossings within the South West Unit, however, care will be taken when clearing snow in the vicinity of railway tracks, gates, bridge parapets, fences, overhead electricity cables, walls and other railway boundaries.

6.0 MUTUAL AID ARRANGEMENTS

6.1 Mutual Aid

Should Scotland TranServ receive a request for any collaboration or mutual aid, from any organisation, Local Authority, airport operator, service station etc, be it to supply any de-icing material or spreading or ploughing equipment, this will be reviewed and considered by the WSM and a decision made dependant on the situation on the South West Unit at the time.

All requests for collaboration or mutual aid should be made to the WSDO, who will contact the Duty Manager and WSM to review the request.

Where the Director instructs the mobilisation of any or all of the Snow Plans which were produced for the M8, M80, M77, A77, M74 or A74 routes, Scotland TranServ will liaise with the relevant operational organisations in relation to the implementation of such plans.

These Plans sit separately from this document, but each organisation has a copy of the relevant Plans for which their organisations are involved in the implementation and operation.

Areas involved with each relevant plan are:

M74, A7: South West OC, South East OC, M6DBFO
M77, A77:– South West OC, A77/A726 DBFO
M80:– M80 DBFO,– South Eeast OC, South West OC

7.0 WINTER SERVICE PATROLS

7.1 Winter Service Plant and Reporting

7.1.1 *Winter Service Plant*

Appendix 4 of this WSP details the Winter Service Plant for Winter Service Patrols.

Each patrol vehicle will carry a welfare kit comprising 24 space blankets, 24 bottles of water and 24 energy bars for distribution in the event of a Critical Incident, as defined in our Incident Response Plan.

7.1.2 *Winter Service Patrol Report*

Winter Service Patrol Reports will be provided daily detailing the previous night's patrols, in the format included in Appendix 1 of this WSP. These reports will be held electronically with remote access allowing interrogation by the Director and the Performance Audit Group.

Information and discussions with Cat A and Cat B Trunk road patrols will be entered into the communication log, and held within our electronic records management system.

8.0 PRECAUTIONARY TREATMENT ROUTES

The philosophy behind winter service operations is, to carry out precautionary treatment before ice forms or snow settles on the road. To enable this to be undertaken effectively depends on a mixture of local knowledge and experience, accurate local weather forecasts and an awareness of the road state at the time.

8.1.1 *Precautionary Treatment Routes, Contingency Plans for Alternative Access and Loading Point Locations*

Descriptions and maps for each precautionary treatment route showing the respective loading points, are included in Appendix 2. These routes allow for the complete coverage of any individual carriageway and slip roads including hardstrips and hardshoulder. Remote lay-bys will not receive precautionary treatments, but will receive reactive treatment as required.

The route times shown are indicative and are unlikely to be met exactly on each precautionary treatment. However, all routes are designed to be completed within the required two hour period.

All routes will be treated from available access points, dependent on where any closure or blockage might be located. The network has been examined and no "critical" locations have been identified where it would not be possible to carry out treatment. On all single carriageway trunk roads there are winter service vehicles available to continue treatment to reach the closure or obstruction point. For example, A76 will have winter service vehicles working from both north to south and south to north, which will continue treatment until the closure or obstruction point is reached. On motorways and dual carriageways, routes can be accessed from slip roads on either side of the closure or obstruction point. The relevant Local Authority and local Police office would be continually consulted with to ensure this happened.

The depots to be used as loading points, will be Polmadie, Ayr, Stranraer, Castle Douglas and Dumfries. Dry runs on all precautionary treatment routes will be carried each September prior to the commencement of the winter service season. The results of each dry run will be recorded electronically on Form 9

8.1.2 Cycling Facilities in Urban Area

Details of the precautionary treatment footway categories for footways and cycling facilities are included in Appendix 8 of this Winter Service Plan. These categories have been reviewed and routes developed to ensure compliance with contractual obligations.

9.0 SNOW AND ICE CLEARANCE

9.1 Snow Clearing

To assist in route familiarity for all winter service operations, snow ploughing will be carried out on the same routes as those designed for precautionary treatment. Treatment routes for ploughing have been included in Appendix 10.

9.1.1 *Arrangements and Resources for Managing Snowfall*

When snowfall is experienced, additional non-salting vehicles, fitted with ploughs, will be mobilised to aid in echelon ploughing on the dual carriageways and motorways. Details of these additional vehicles can be found in Appendix 4 of this Winter Service Plan.

Ploughing of snow will be carried out to efficiently remove the maximum amount of snow without damaging the carriageway surface or plough blade, and will be accompanied by salt applications at 40g/sqm. Should snow depth on the carriageway exceed 130mm then salting may be suspended with ploughing carried out by a laden vehicle to aid traction. The application of salt will be recommenced as soon as practicable.

The clearance procedure for dual carriageways and motorways will be echelon ploughing (2 or more vehicles moving in the same direction, one behind each other on different lanes). In this technique salting vehicles will be joined by non-salting, ploughing vehicles. The salting vehicles will plough lane 1, treating lane 1 and 2 at 40g/m with the non-salting vehicles ploughing the remaining lanes.

Ploughing techniques will follow the following procedures:

a) 2 Lane Dual Carriageway Roads without Hardshoulders:
   (a) Plough the left hand lane to the verge;
   (b) Plough the right hand lane to the central reservation.

b) 2 Lane Dual Carriageway Roads with Hardshoulders:
   (a) Plough the left hand lane to the hardshoulder;
   (b) Plough the right hand lane to the central reservation.
   (c) Plough the hardshoulder to the verge;

c) 3 Lane Dual Carriageway Roads without Hardshoulders:
   (a) Plough the centre lane to the left hand lane;
   (b) Plough the left hand lane to the verge;
   (c) Plough the right hand lane to the central reservation.

d) 3 Lane Dual Carriageway Roads with Hardshoulders:
   (a) Plough the centre lane to the left hand lane;
   (b) Plough the left hand lane to the hardshoulder;
   (c) Plough the hardshoulder to the verge;
   (d) Plough the right hand lane to the central reservation.

e) 3 Lane Dual Carriageway Roads with Hardshoulders and narrow centre reserves with concrete barrier:
   (a) Plough the centre lane to the left hand lane;
   (b) Plough the left hand lane to the hardshoulder;
   (c) Plough the right hand lane to the hardshoulder;
   (d) Plough the hardshoulder to the verge

Condition Criteria	Category A Patrol Routes		Non Category A Patrol Routes	
	Dual Carriageways & Motorways		Dual Carriageways	Wide Single 2+1 (WS 2 + 1) & Single Carriageways
	Number of Existing Lanes		Number of Existing Lanes	
	2	3 or more	2	1 or 2 (WS 2 + 1)
	Minimum number of lanes in each direction free from ice and snow as far as is reason ably practicable		Minimum number of lanes in each direction free from ice and snow as far as is reasonably practicable (except when re snow gates)	
Snow at any time	1	2	1	1
Following clearance of minimum lanes or the cessation of snowfall all lanes are to be clear of snow within	6 hours	6 hours	12 hours	12 hours

Table 7.2.D.1 – Snow Clearance

9.1.2 *Road Closure Procedure*

The process for road closures is outlined in section 4.2.4 of this WSP.

9.1.3 *Prolonged Snowfall Strategy*

In the event that extreme weather conditions are forecast or experienced a dedicated 'snow' control room will be established in the Control Room at Polmadie.

The roster of WSDO will give continual management presence in periods of extreme weather. All snow clearing operations on the network will be controlled by the WSDO to ensure that the optimum use is made of the dedicated winter vehicles and any externally resourced plant items, as listed in Appendix 4 Table 7.2/J/11.

When required the WSM, duty Supervisor and other staff will be called upon to assist the WSDO. Police attendance at this control room would be encouraged to ensure that actions taken are carried out in full knowledge of all present circumstances.

All resources on the network including reserve and additional vehicles will be utilised with the main efforts directed at key routes, to enable traffic flows to be maintained, or in the event of a road closure, to be recommenced at the earliest opportunity. Resources will be deployed to areas of highest importance from other areas of the network should conditions permit. Plant will only be reallocated on a temporary basis by agreement with the WSDO.

Winter service drivers will be rostered to allow vehicles to operate on a 24 hour basis should conditions require. Stocks of salt, potassium acetate, sharp sand and winter quality fuel will be maintained at sufficient levels in the depots over the winter period to permit full-scale operations over an extended period.

During severe weather conditions the WSM will liaise directly with the Police to ensure that up to date information is available regarding travel conditions and blocked routes. All media enquiries will be directed to the Press Office of Transport Scotland.

The WSM will, where considered appropriate, make suggestions to Transport Scotland in relation to the broadcasting of information during or in response to forecast severe winter weather conditions, and shall advise winter controllers of adjacent authorities or agents accordingly.

9.1.4 *Arrangements for Safe Clearance of Snow from Wide Single Carriageways*

When clearing wide single carriageway roads, particularly those having more than two lanes, snow clearance operations must avoid the build-up of snow in the centre of the road. This should be done from the centre line out, in both directions to the left verge, and then ploughing to widen the carriageway towards verges in each direction.

9.1.5 *Arrangements for Safe Clearance of Snow Adjacent to Vertical Concrete Barriers*

The South West unit has vertical concrete barrier on the M74 between Port Eglinton Viaduct and east of junction 2A (Fullerton Road). When required to plough snow on parts of this section where there is insufficient room in the central reserve to accommodate cleared snow, it will be ploughed from the centre reserve, by echelon ploughing across to the hard shoulder. In the sections that have a solid barrier here, over bridges, snow would either be pushed over this, or a closure will be implemented and snow removed manually or by mechanical excavator.

9.1.6 *Treatment Strategy for Footways, Footpaths, Cycle Facilities*

Clearance will be carried out manually, supported by pedestrian footway blower, excavators or mini ploughs as appropriate. If overnight snow is forecast, or adverse conditions are reported by drivers of Winter Service Patrols, other front line winter service plant, route inspectors, Police Scotland or other sources, sufficient resources will be mobilised early the next morning to allow the criteria in the tables below to be met.

Categories	Requirements
A and B	Apply de-icing treatment before 08.00 hours each morning to any ice which has formed.
C	Clear all ice by 17.00 hours on the same day the ice formed excluding Saturdays and Sundays when the area shall be cleared by 17.00 hours on the Monday immediately following.
A, B and C	Following clearance of ice or if ice has melted naturally during the day, spread anti-icing materials to prevent ice formation on the cleared surfaces in accordance with paragraph 3.1.17 of this Schedule.
D	These footways, footbridges and cycleways shall receive treatment when required by the Director.

Table 7.2.E.1 – Footways, Footbridges and Cycleways Categories A, B, C and D – Response Times and Clearance Requirements for Ice

Categories	Requirements			
	General	**Between 06.00 and 18.00 hours**	**Between 08.00 and 17.00 hours**	**Out with daytime hours**
A and B	Between the hours of 06.00 and 18.00, commence snow clearing as soon as practicable to prevent compaction by traffic. Ploughing should be continuous thereafter to prevent a build-up of snow.	Clear all snow within 2 hours of snow ceasing to fall. On wide routes, 1.2 metre minimum width shall be cleared initially.		Clear snow when required by the Director.
C	Between the hours of 08.00 and 17.00, commence snow clearing as soon as practicable to prevent compaction by traffic. Ploughing should be continuous thereafter to prevent a build-up of snow.		Clear all snow by 17.00 hours on the day the snow first fell excluding Saturdays and Sundays when the area shall be cleared on the Monday immediately following. On wide routes, 1.2 metre minimum width shall be cleared initially.	Clear snow when required by the Director.

Categories	Requirements			
	General	**Between 06.00 and 18.00 hours**	**Between 08.00 and 17.00 hours**	**Out with daytime hours**
A,B and C		Following clearance of snow, spread anti-icing materials to prevent ice formation on cleared surfaces in accordance with paragraph 3.1.17 of this Schedule. Note brine shall not be used as the anti-icing agent where compacted snow or ice lenses remain on the surface of the route.	Following clearance of snow, spread anti-icing materials to prevent ice formation on cleared surfaces in accordance with paragraph 3.1.17 of this Schedule. Note brine shall not be used as the anti-icing agent where compacted snow or ice lenses remain on the surface of the route.	
D	These footways, footbridges and cycleways shall receive treatment when required by the Director.			

Table 7.2.E.2 Footways, Footbridges and Cycleways Categories A, B, C and D – Response Times and Clearance Requirements for Snow or Ice Occurring Together

9.2 Footways, Footbridges and Cycle Facilities in Categories A, B, C and D

The locations of the footways, footbridges and cycle facilities are shown in Table 7.2.E.3 below. Plans are shown in Appendix 8.

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway			Route Centreline Length (m)		
				Start	Finish	Category A	Category B	Category C	Category D
1	A77	Symington	Hansel Village F/bridge			100	100		
2	A726	East Kilbride	Queensway	A725 junction	B761 junction	3000	3000		
3	A725	East Kilbride	Kingsway	Start of 50mph	A726 junction	3100	3100		
4	A77	Girvan	Dalrymple St	Start of Dalrymple St	Ailsa St West	260	260		
			Dalrymple St	Ailsa St West	Duncan St	560	560		
			Bennane Road	Shallochpark Roundabout	Rajput Drive			380	
			Bennane Road	Rajput Drive	Kirkpatrick St			580	
			Kirkpatrick St	Kirkpatrick St	Henrietta St			600	
			Henrietta St	Start of Henrietta St	End of Henrietta St			1640	
			Knockcushan St	End of Henrietta St	Start of Dalrymple St			440	
			Dalrymple St	Duncan St	Duff St			500	
			Dalrymple St	Duff St	Start of Glendoune St			280	
			Glendoune St	Start of Glendoune St	End of Glendoune St			700	
			Bridge St	Stumpy Corner	Car Park Entrance			680	
			Vicarton St	Car Park Entrance	Railway Bridge			1240	
5	A77	Maybole	High St	Carrick St	St Cuthbert's Rd	640	640		
			Kirkoswald St	Carrick Academy	Lady Land Road			1200	
			Whitehall	Lady Land Road	Carrick St	420	420		
			Cassillis Road	Cuthbert St	End of Maybole			1140	
6	A76	Mauchline	Earl Grey St	Fire Station	Garage		450		
			Various	Whole length omitting Category B length					3750
7	A76	New Cumnock		Afton Bridgend	Roundabout		300		
				Roundabout	Garage		1100		
			Various	Whole length omitting Category B length					3500
8	A8	Greenock		Sinclair St	Bullring Roundabout		4280		
9	A78			Nelson St	Bullring Roundabout		720		
				Bullring Roundabout	Nelson St			6600	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway			Route Centreline Length (m)		
				Start	Finish	Category A	Category B	Category C	Category D
10	A78	Wemyss Bay		Ferry Terminal			720		
				Wemyss Bay				1600	
11	A78	Largs		Safeway Roundabout	Aitken St		440		
			Main St	Aitken St	Fort St	500	500		
			Gallowgate St	Fort St	Nardini's		460		
			Haylie Brae	Dalry Road	End of Largs			1160	
			Main St	A760	Safeway Roundabout			1780	
				Nardini's	End of 40MPH			2700	
12	A737	Dalry		Townend St	New St		280		
				Start of 30MPH	Traffic Lights			1600	
				New St	End of 30MPH			1440	
13	A76	Sanquhar		Tolbooth	Leith's Garage		500		
				Outwith Category B section					1250
14	A76	Kirkconnel		Pharmacy	Car Park		500		
				Outwith Category B section					1080
15	A77	Ballantrae	Main St	Start of Ballantrae	Colmonell Junction			210	
			Main St	Colmonell Junction	Royal Hotel			330	
			Main St	Royal Hotel	Spar Shop			406	
			Main St	Spar Shop	End of Ballantrae			1100	
16	A77	Lendalfoot	Main Road	Start of Lendalfoot	End of Lendalfoot			2160	
17	A77	Kirkoswald	Main St	Start of Kirkoswald	Balvaird Road			1040	
18	A77	Minishant	Main Road	Start of Minishant	End of Minishant			1580	
19	A78	Fairlie	Main Road	Pier Road	Kaim View			2180	
19	A78	Seamill	Ardrossan Road	Summerlea Road	Merlewood Road			290	
			Ardrossan Road	Merlewood Road	Fullerton Drive			270	
			Ardrossan Road	Fullerton Drive	Hyndman Road			630	
			Ardrossan Road	Hyndman Road	Seamill Hydro Hotel			400	

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway			Route Centreline Length (m)		
				Start	Finish	Category A	Category B	Category C	Category D
			Ardrossan Road	Seamill Hydro Hotel	End of Seamill			1220	
20	A82			Dunglass	Bonhill			8400	
21	A8	Port Glasgow		Newark Roundabout	Sinclair St			7600	
22	A737/A8	Kilwinning		Within 30MPH in Kilwinning					6000
23	A737	Beith		Between 30MPH signs in Beith					400
24	A78	Skelmorlie		Skelmorlie				2300	
25	A77	Stranraer		A75 Junction	Marine GDS			370	
				Marine GDS	Bowling Green Road			200	
				Bowling Green Road	Ladies Walk			360	
				Ladies Walk	McMasters Walk			870	
				McMasters Walk	Aird Donald Caravan Park			760	
26	A75			Various				3900	
27	A77	Cairnryan		Start of Cairnryan	P&O Entrance			520	
				P&O Entrance	Woodburn Entrance			600	
				Woodburn Entrance	End of Claddyburn Terrace			260	
				Claddyburn Terrace	Petrol Station			260	
				Petrol Station	Cairnryan Port Entrance			550	
28	A75	Dunragit		Main St				1900	
29	A75	Springholm		Springholm				1900	
30	A75	Crocketford		Crocketford				900	
31	A76	Dumfries		Lincluden	Newbridge			1500	
32	A76	Closeburn		Coal Yard	Garage			500	
33	A76	Thornhill		101 Boutique	South End			400	
34	A76	Carronbridge						760	
35	A701	Heathhall		A75 Roundabout	Locharbriggs			3370	

Table 7.2.E.3– Category A, B and C Footways, Footbridges and Cycleways within the Unit

10.0 DE-ICING MATERIALS

10.1 Details

10.1.1 *Specification, Storage & Testing Methods, Suppliers and Stock Levels*

Road salt will be 6.3mm grading particle size complying with BS 3247 and treated with an anti-caking agent, supplied by Irish Salt Sales. Salt tonnages will be reviewed with supplier at regular intervals and will be replaced prior to the salt stock reaching the minimum stock level.

Salt storage areas will be maintained to ensure the following:

- Storage in dry conditions in a roofed building at all depots, with the exception of Polmadie where it will be under a temporary cover, so that moisture content does not exceed 4%,
- No sheer faces left on stockpiles,
- Salt stockpiles do not become contaminated, and
- Salt stockpiles or adjacent operations do not affect the environment.

Within 10 days of delivery, salt will be tested at loading points in accordance with BS812:

- moisture content, particle size distribution (1 test per 500 tonnes),
- soluble sulphate compounds and chloride content (1 test per 1500 tonnes).

Salt stocks will also be monitored for moisture content at monthly intervals, and results recorded electronically.

Single size 6mm grit or coarse sand to assist traction in compacted snow conditions can be made available at all depots.

Potassium Acetate (50%) to SAE AMS 1435C, suitable for spraying on the locations identified in Appendix 12, will be stored at Polmadie depot, with small quantities drawn off for Ayr depot to allow the various footbridges to be treated by hand.

Magnesium Chloride to be used as a replacement for sodium chloride brine at times of extreme low temperatures will be available for use throughout the network. Magnesium Chloride brine will only be considered for use when temperatures are forecast to drop below -7°C and will only be used under the direction of the Winter Service Manager and with the approval of Transport Scotland. The material will be spread by conventional spreader. The minimum level of material stored at Polmadie will be 15,000 litres.

For periods where temperatures remain below -7°C and further precautionary treatment is required, magnesium chloride will be considered as an alternative to sodium chloride brine on a prioritised route basis dependant on network wide conditions and available quantities.

10.1.2 *De-Icing Materials Stock*

Details of the minimum and actual salt stock levels that will be available in the unit are included in Appendix 3 of this Winter Service Plan. Polmadie depot will hold a supply of 10,000T under a cover, which will be restocked as required from the stockpile held at Hamilton's yard in Larkhall.

Rock salt for brine production at a concentration of between 20 and 23% will be stored at the locations shown below and will be managed so that there are sufficient stocks in place

to fulfil contract requirements. Routes from Castle Douglas will be supplied with brine from Wayside depot, upon completion of their routes. Brine concentration will be measured automatically by digital sesnors fitted to all saturators, and daily checks will be carried out using a refractometered and recorded electronically.

Salt saturators are installed as showm in Figure 10/1, with the saturators and spreaders also acting as storage vessels.

Depot	Saturator Capacity (L)	Spreader Capacity (L)	Total Capacity (L)	Production Rate (L/Hr)
Polmadie	57,000	82,580	139,580	Up to 10,000
Ayr	18,000	28,460	46,460	2,500
Dumfries	10,000	21,000	31,000	Up to 10,000
Stranraer	10,000	10,000	20,000	3,000

Figure 10/1

Brine production and storage has been scoped to provide sufficient brine for two precautionary treatments in a 24 hour period. Figure 10/2 below outlines material usage for each route and also the amount of brine required to be produced in each depot per 24 hour period. Brine production is continuous over the winter period and replenishment of brine stocks will therefore be completed within two hours of being depleted.

Salt and Brine Usage per route							
Route	Route Tonnage (20g/m^2)	Depot Tonnage (20g/m^2)	70 % Salt (T)	30% Brine (Litres)	Brine required per depot at 20g/m^2 (Litres)	Brine required per depot at 40g/m^2 (Litres)	Depot
P20/1	6.39	76.03	4.47	1917	22,809	45,618	Polmadie
P20/2	6.32		4.42	1896			
P20/3	5.85		4.10	1755			
P20/4	4.76		3.33	1428			
P20/5	5.53		3.87	1659			
P20/6	7.88		5.52	2364			
P20/7	7.31		5.12	2193			
P20/8	8.14		5.70	2442			
P20/9	6.83		4.78	2049			
P20/10	5.03		3.52	1509			
P20/11	5.27		3.69	1581			
P20/12	6.72		4.70	2016			
A20/1	8.24	31.0	5.77	2472	9,300	18,600	Ayr
A20/2	7.39		5.17	2217			
A20/3	8.10		5.67	2430			
A20/4	7.27		5.09	2181			
W20/1	8.14	22.34.0	5.70	2442	6,702	13,404	Dumfries
W20/2	7.10		4.97	2130			
C20/1	7.10		4.97	2130			
S20/1	7.83	16.13	5.48	2349	4,839	9,678	Stranraer
S20/2	8.30		5.81	2490			
Total	145.5	145.5	101.85	43,650	43,650	87,300	

Figure 10/2 Brine Requirements

11.0 STRATEGIC SALT STOCKS

11.1 Details

When instructed by Transport Scotland, Scotland TranServ will carry out the following:

1. seek prices from all salt suppliers to ensure value for money
2. manage and maintain the strategic salt stocks on behalf of the Director including accurate stock monitoring using an approved weigh bridge facility
3. arrange haulage of strategic salt stocks from the initial delivery point to the strategic salt stock depots
4. maintain accurate records of quantities and their locations
5. undertake stock rotation to avoid deterioration of the salt
6. liaise with all relevant third parties, such as local authorities, to ascertain their need for supplies of strategic salt
7. make arrangements with such third parties for loading and haulage of, and 24 hours a day, seven days a week access to the strategic salt, and
8. Invoice all such third parties for all costs relating to the provision of strategic salt stocks on behalf of the Director.

At present a quantity of strategic salt is stored within the south west unit as detailed in table below. In conjunction with Transport Scotland, this will be kept under constant review.

Stockpile Location	Quantity stored (T)
Wm Hamilton at Larkhall	44,600
King George V docks	24,000

12.0 WINTER SERVICE PLANT

12.1 Winter Service Plant

All front line and reserve winter service vehicles are fitted with data loggers and Masternaut GPS which provides records of driver time, distance travelled, treating/not treatting, spread rate and width, all continuously referenced to the Ordnance Survey grid. The duty Supervisor will download the data logger information each morning after a treatment has been carried out. The outputs will be retained electronically.

In the event of a data logger malfunction, equivalent manual records will be produced within 12 hours. The duty Supervisor will update the register for recording data logger malfunctions. The Fleet Manager will review the register and will raise a Corrective Action Request where appropriate, copied to PAG, and will investigate the reason for the data logger malfunction. On completion of the investigation the Fleet Manager will initiate the appropriate action to close out the Corrective Action Request.

12.1.1 *Front Line and Reserve Winter Service Plant*

Details of front line and reserve winter service plant are given in Appendix 4.

12.1.2 *Additional Winter Service Plant*

During severe conditions the WSDO, after consultation with the WSM, may instruct the duty Supervisor to mobilise additional resources to assist in snow clearing operations.

Loading shovels and trucks, as appropriate, will be utilised from local contractors, haulage companies and external plant hirers to supplement additional in-house resources. Stand-by contracts will be entered into with plant suppliers to ensure that equipment can be made available at short notice to respond to emergency situations or protracted periods of inclement weather.

Details of additional winter service plant resources and contacts are given in Appendix 4.

12.1.3 *Loading Winter Service Plant*

Details of loading winter service plant are given in Appendix 4.

12.2 Calibration of Winter Service Plant

12.2.1 *Calibration arrangements and procedures*

Independent calibration of front line and reserve winter service vehicles to BS1622 will be carried out in September and in January of each winter service period in the base depot for that item of plant, by the spreader manufacturers, for the specific materials used. Re-calibration and testing will be carried out after repairs to spreading equipment and at other times when necessary to ensure the accuracy of de-icing material spreading.

Calibration testing in September will comply with tests A and B while calibration testing in January should comply with test B of BS1622.

12.2.2 *Calibration records*

Calibration certificates will be held electronically in accordance with our Integrated Management System.

13.0 COMPOUNDS, DEPOTS AND FACILITIES

13.1 Schedule of depots and facilities

A schedule of depots and their facilities is included within Appendix 5.

14.0 MAPS, DRAWINGS AND GRAPHICAL INFORMATION

Maps of treatment, patrol, reactive footway and ploughing routes are included at Appendices 2, 4, 8 and 10 respectively.

1. A82 Alexandria Bypass - Alt. 40 - Dual Cameras
2. A898 Erskine Bridge - Alt. 31
3. M8 Kinning Park - Alt. 10
4. M8 Riddrie - Alt. 80
5. M74 Rutherglen
6. A725 Crossbaskets - Alt. 117
7. M8 Bishopton (Erskine) - Alt. 35 - Dual Cameras
8. A8 Port Glasgow - Alt. 10 - Dual Cameras
9. A78 Gourock - Alt. 40 - Dual Cameras
10. A78 Ardrossan - Alt. 5
11. A737 Highfield - Alt. 80 - Dual Cameras
12. A737 Howwood - Alt. 40
13. M77 Newton Mearns - Alt. 80
14. A77 Kilmarnock - Alt. 80
15. A77 Dutch House - Dual Cameras
16. A76 Cumnock - Alt. 140
17. M74 Millbank - Alt. 190 - Dual Cameras
18. A75 Collin - Alt. 11 - Dual Cameras
19. A701 Southerly Ridge - Alt. 165 - Dual Cameras
20. A76 Closeburn - Alt. 70 - Single Camera
21. A76 Kirkconnel - Alt. 160
22. A75 Crocketford - Alt. 120 - Dual Cameras
23. A75 Knockbrex - Alt 40
24. A75 Drumflower - Alt. 15 - Dual Cameras
25. A77 Glen App - Alt. 165
26. A77 Turnberry - Alt. 10
27. A77 Crossragual - Alt. 116 - Dual Cameras
28. M74 Canderside - Alt. 180
29. A75 Gretna - Alt. 27 - Dual Cameras
30. A78 Sharphill - Alt. 85 - Dual Cameras
31. M8 St James Interchange - Alt. 8
32. A76 Blackwood Farm - Alt. 205 - Dual Cameras

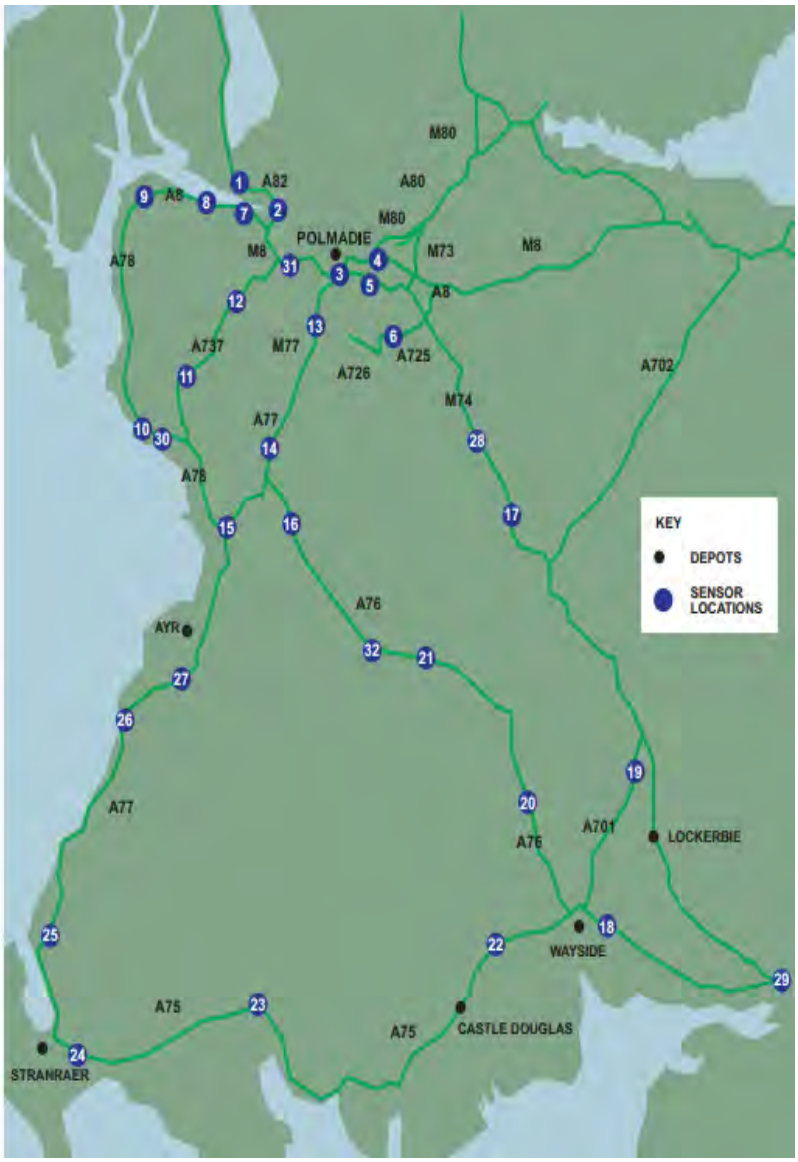


Figure 14/1 Depots and Road Sensor Sites

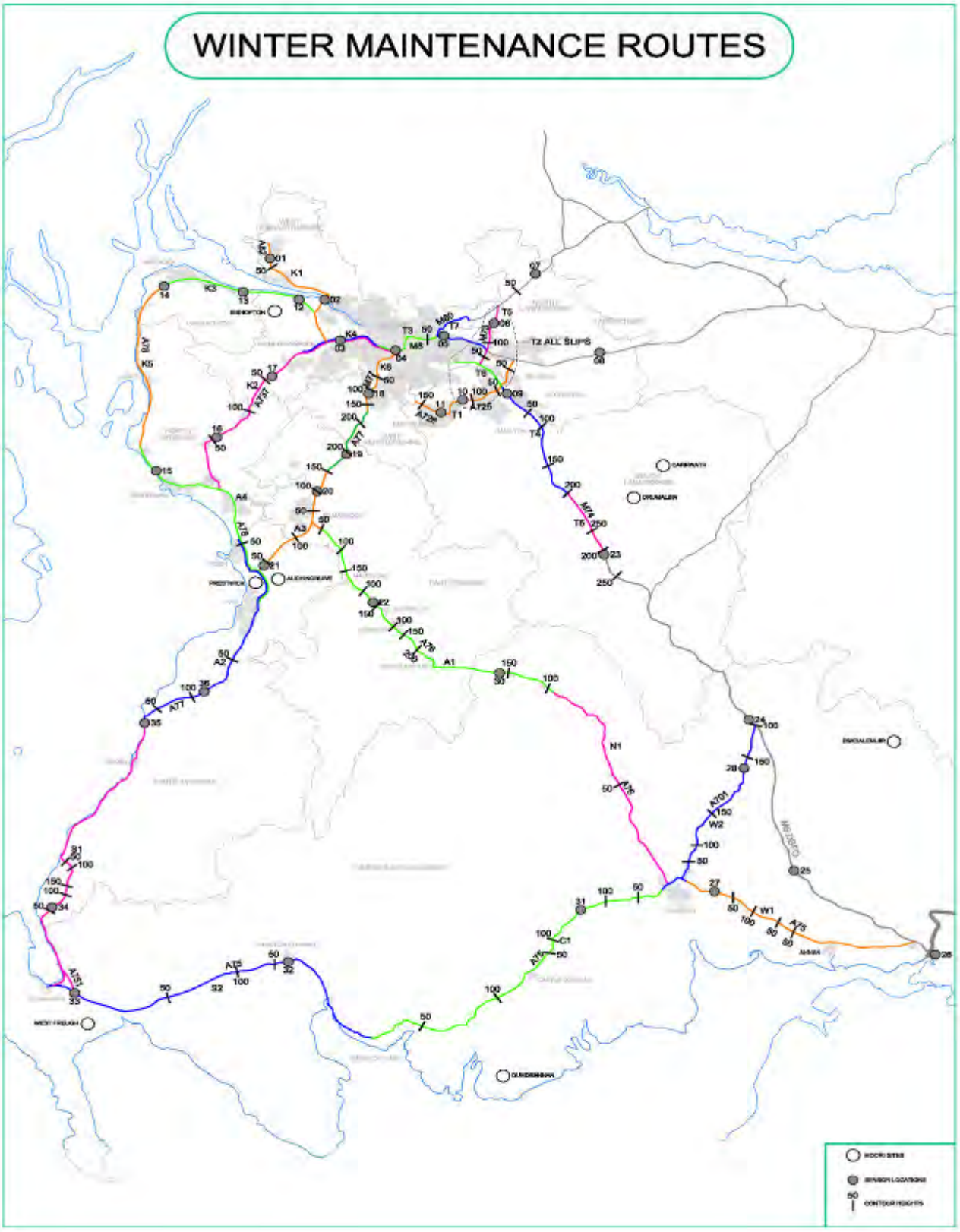


Figure 14/2 Route Heights

Figure 14/3 Snow, Ice and Hidden Message Signs

Figure 14/4 Salt Bins

15.0 COMPILING AND MAINTAINING RECORDS

The following list identifies typical records required, which will be held electronically:

(i) decisions taken, when and by whom,
(ii) planned and actual treatment records,
(iii) planned and actual response times achieved,
(iv) planned and actual commencement times,
(v) planned and actual route times,
(vi) planned and actual spread rates,
(vii) observations and actions taken by the Winter Service Patrols,
(viii) output from Winter Service Plant on-board data capture devices,
(ix) Winter Service Plant down time and software faults,
(x) Winter Service Plant deployment records (including vehicle location records) and driver and operator logs,
(xi) logs (both manual and electronic) for telephone, electronic mail and two way communication calls,
(xii) loading point de-icing stocks and replenishment orders,
(xiii) ice prediction system Records,
(xiv) weather forecasts and actual weather experienced,
(xv) complaints by members of the public and Trunk Road users,
(xvi) accidents during winter conditions,
(xvii) road closures due to winter conditions,
(xviii) weights and volumes as appropriate for the amount of de-icing material(s) spread for each route,
(xix) pre- and mid-season road sensor calibration systems,
(xxi) Winter Service Plant calibration certificates, and
(xxii) actual salt stocks held including strategic salt stocks.

Appendix 7 of this WSP details recording proforma.

Within 24 hours of completing each precautionary salting operation or other snow or ice removal operation reports will be completed and held electronically. The reports will detail the summary forecast and actual weather data, planned and actual spread rates, planned and actual commencement times, completion times for each route, amount of de-icing material spread on each route and any other relevant information.

These records will be updated daily and held in a shared electronic storage facility, providing a remote access facility for the Director and the Performance Audit Group.

16.0 SNOW POLES

There are currently no snow poles within the South West Unit. The provision of snow poles will be kept under constant review and should the situation change, recommendations will be made to the Director.

17.0 SNOW GATES

There are currently no snow gates within the South West Unit. The provision of snow gates will be kept under constant review and should the situation change, recommendations will be made to the Director.

18.0 VARIABLE MESSAGE, SNOW, ICE AND HIDDEN MESSAGE SIGNS

18.1 Operating and liaison procedures

In the event of severe weather conditions the use of Traffic Scotland variable message signs may be requested, where appropriate. Our WSDO will contact the Traffic Scotland Operator to request this, after consultation with our WSM.

19.0 SALT BINS

19.1 Stock level monitoring and replenishment procedures

Salt bins will be provided at the locations detailed below between late September and 15th May in each annual period. Stock levels at these bins will be monitored during the weekly safety inspections and replenished as necessary to ensure sufficient supply is always available for public use.

Damaged or missing salt bins will be replaced within 48 hours of this being identified.

At the end of each winter season, the salt bins will be collected and taken to the nearest depot for emptying, washing and greasing of hinges.

No.	Location	Size
1	A75 Springholm, at the shop	0.5m^3
2	A75 Crocketford at A712 junction	0.5m^3
3	A76 Thornhill at the cross	0.5m^3
4	A76 Carronbridge at Sawmill junction	0.5m^3
5	A76 Sanquhar at Bus stop near post office	0.5m^3
6	A76 Kirkconnel at Needle St junction	0.5m^3
7	A76 New Cumnock South at Bridgend	0.5m^3
8	A76 New Cumnock North at Pathhead	0.5m^3
9	A76 Mauchline at the cross	0.5m^3
10	A701 Locharbriggs at Library access	0.5m^3

Figure 19/1 Salt Bin Locations

Transport Scotland have identified a requirement to provide additional locations where salt heaps maybe applicable. While these are identified below, it is proposed that these locations are covered by a 7.5T vehicle with sufficient staff to spread materials as required. These resources would be made ready at times when the weather forecast has intimated that significant falls of snow are anticipated, and dispatched under the direction of the WSDO when conditions dictate their use.

Road Number	Location
M77	Southbound from junction 3 to junction 4
M8/M77	Southbound slip to M77 from M8
M74	Southbound from junction 10 to junction 12
A737	Risk Brae, from Howwood to Roadhead roundabout
A75	The Glen to the west of Dumfries
A75	Glen Luce Bypass
A76	Skerrington roundabout to Templeton Roundabout
A76	New Cumnock to Rigg Farm

Figure 19/2 Additional Locations

20.0 SALT MEASUREMENT APPARATUS

20.1 Equipment and locations and recording methods

The total quantity of de-icing materials spread on each occasion on each precautionary treatment route will be recorded by weighing facilities located at each of the loading points. The amount of brine and salt comprised in the total amount will be assessed and correlated and will be supplied to Transport Scotland through the salt portal. The records will be held electronically with remote access provided to Transport Scotland and PAG.

Appendix 1

Winter Constructional Plant for Winter Service Patrols

Winter Service Patrol Routes

Winter Service Patrol Report Record

Table 7.2.J.1 Winter Constructional Plant for Winter Service Patrols

Winter Constructional Plant	Depot Location	Specification	Quantity
Fixed salting vehicle	Polmadie	$6m^3$	1
Fixed salting vehicle	Polmadie	$6m^3$	1
Fixed salting vehicle	Polmadie	$6m^3$	1
Fixed salting vehicle	Polmadie	$6m^3$	1
Fixed salting vehicle	Ayr	$6m^3$	1
Fixed salting vehicle	Ayr	$6m^3$	1
Fixed salting vehicle	Ayr	$9m^3$	1

Winter Service Patrol Routes:

POLMADIE P1A – M8 Jct 10 - 21, M77 Jct 1 – 5, M80 Jct 1 - 3

POLMADIE P2A – M74 Jct 6 - 12, A725 Whistleberry - A726 Eaglesham

POLMADIE P3A – M74 Jct 3 - A8 Langbank, M898, A898 Erskine Bridge

POLMADIE P1B – A737 Polmadie - Kilwinning and A76 Kilmarnock - Cumnock

AYR A1B – A76 Cumnock - Dumfries and A75 Dumfries - M6 Junction

AYR A2B – A77 Girvan - Stranraer and A75 Stranraer - Gatehouse of Fleet

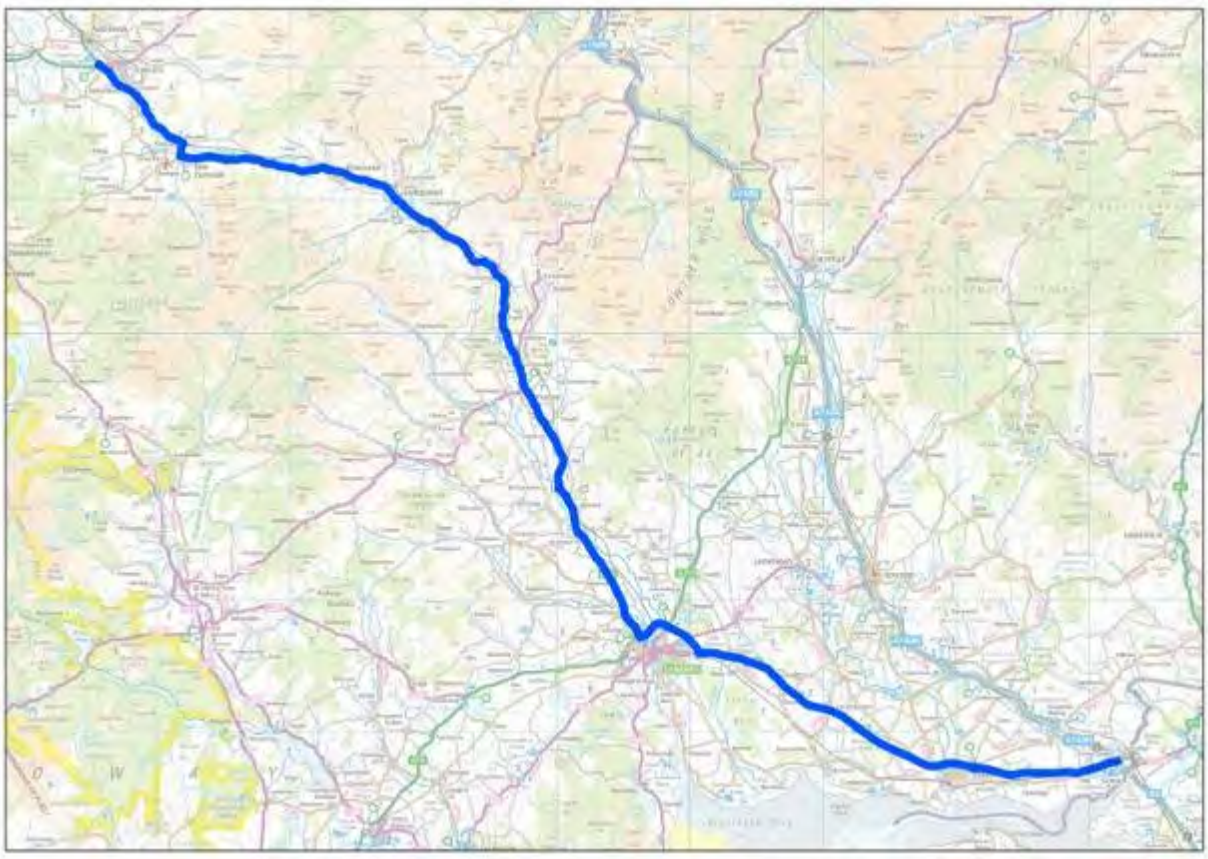
AYR A3A – A77 Whitletts - Meiklewood, A78 Dutchhouse - Pennyburn

Cat B Patrol Route Ayr A1B

A76 Cumnock – Dumfries and A75 Dumfries – M6 Junction

Route No	AYR B-1	Time to Route (min)	28
Depot	Ayr	Patrol Length (Km)	112
Depot to Route (Km)	28	Av. Patrol Speed (Km/hr)	60
Route to Depot (Km)	81	Route Time (Hrs)	2.35 hrs

Depot	Description
Ayr	Depot to A76 A70 roundabout at Cumnock
	A76 to A75 roundabout at Dumfries
	A75 Dumfries to Eastern end of Collin Bypass, turn and return to Dumfries A75 A780 roundabout
	A75 East to Gretna
	Turn and return to western end of Gretna Bypass



Cat B Patrol Route Ayr A2B

A77 Stranraer - Girvan and A75 Stranraer - Gatehouse of Fleet

Route No	AYR B-2	Time to Route (min)	45
Depot	Ayr	Patrol Length (Km)	125
Depot to Route (Km)	39	Av. Patrol Speed (Km/hr)	60
Route to Depot (Km)	150	Route Time (Hrs)	2.25 hrs

Depot	Description
Ayr	Depot to Shallochmill roundabout
	Shallochmill roundabout to stair Drive , Stranraer to Kirkcowan junction B733
	Turn and travel west to end of dual carriageway and turn in layby
	Travel east on A75 to Gatehouse of Fleet then to
	Stair Dr, Stranraer then A77 to Shallochmill roundabout

Cat B Patrol Route Polmadie P1B

A737 Linwood – Kilwinning and A76 Kilmarnock - Cumnock

Route No	Polmadie B-1	Time to Route (min)	15
Depot	Polmadie	Patrol Length (Km)	112
Depot to Route (Km)	21	Av. Patrol Speed (Km/hr)	60
Route to Depot (Km)	21	Route Time (Hrs)	2.0 hrs

Depot	Description
Polmadie	Depot to St James Interchange
	A737 from St James Interchange
	Travel A737 and A78, A71 to A76 at Bellfield Kilmarnock
	A76 to roundabout at New Cumnock
	Turn and A76 to A77 Bellfield
	Return via A71, A78 to Kilwinning
	A737 from Kilwinning to M8 St James Interchange
	St James Interchange to Depot

Cat A Patrol Route Polmadie P1A

M8 Jct 10 - M77 Jct 5 and M80 Jct 1 - Jct 3

Route No	POLMADIE A-1	Time to Route (min)	10
Depot	Polmadie	Patrol Length (Km)	61
Depot to Route (Km)	15	Av. Patrol Speed (Km/hr)	87
Route to Depot (Km)	15	Route Time (mins)	45

Depot	Description
Polmadie	M8 junction 10 to M77 jct 5, then turn and travel via M8 Kingston Bridge to junction 13, then travel M80 to junction 3 and return to M8 and proceed eastbound to junction 10.

Cat A Patrol Route Polmadie P2A

A725 Whistelberry - A726 and M74 Jct 6 - Jct 12

Route No	POLMADIE A-2	Time to Route (min)	15
Depot	Polmadie	Patrol Length (Km)	88
Depot to Route (Km)	19	Av. Patrol Speed (Km/hr)	88
Route to Depot (Km)	19	Route Time (mins)	60

Depot	Description
Polmadie	A725 Whistleberry toll to A725 Whirlies then on to A726 to MacDonalds roundabout and turn. Patrol A726 and A725 to Whistleberry then on to M74 s/b to jct 12 and turn and patrol M74 back to junction 5 and then take A725 to Whistleberry toll.

Cat A Patrol Route Polmadie P3A

M74 Jct 1 – 3, M8 - A8 Langbank, M898 and A898 Erskine Bridge

Route No	POLMADIE A-3	Time to Route (min)	10
Depot	Polmadie	Patrol Length (Km)	82
Depot to Route (Km)	11	Av. Patrol Speed (Km/hr)	80
Route to Depot (Km)	10	Route Time (mins)	58

Depot	Description
Polmadie	M74 jct 3 to M8 then A8 Langbank, then turn and proceed M8 e/b and then on M898 and over A898 Erskine Bridge, then turn and proceed over A898 erskine Bridge then on to M8 e/b and then M74 e/b to jct 3.

Cat A Patrol Route Ayr A3A

A77 Whitletts - Meiklewood, A78 Dutchhouse - Pennyburn

Route No	AYR A-3	Time to Route (min)	30
Depot	Ayr	Patrol Length (Km)	82
Depot to Route (Km)	32	Av. Patrol Speed (Km/hr)	85
Route to Depot (Km)	30	Route Time (mins)	58

Depot	Description
Ayr	Depot to A77 Meiklewood interchange to A77 Dutchhouse roundabout to Whitletts roundabout to Dutchhouse to A78 Monktonhead to Pennyburn roundabout to Dutchhouse roundabout to Meiklewood Interchange.

Winter Service Patrol Report Record

Table 7.2.J.3 – Winter Service Patrol Report Record

Patrol Route…… Date…… Information checked by……

Winter Service Patrol start and end time	**Weather conditions for Winter Service Patrol route**		**Assessed road condition (by driver) (X)**				**Assessed residual salt level (by driver) (X)**			**Action implemented (use symbols provided below)***						**Route salted prior to patrol (X)**		
	Air (℃)	Road Surface temperature (℃)	Snow	Icy	Wet	Dry	High	Medium	Low	Action code	Treatment Type	Spread rate (g/m^2)	Approximate location of salting or other action	Treatment Start Time	Treatment End Time	Yes	No	Time of salting

*Action symbols:

1	Spot treatment as instructed by the Winter Service Duty Officer.	2	Spot treatment as determined by driver.
3	Route treatment as advised by the Winter Service Duty Officer.	4	Route treatment as determined by driver.
5	Attend to runoff or seepage on surface.	6	Remove obstruction (e.g. dead dog, fallen tree, and other obstructions.) from surface.
7	Pre-wetted Salt	8	Dry Salt
9	Potassium Acetate		

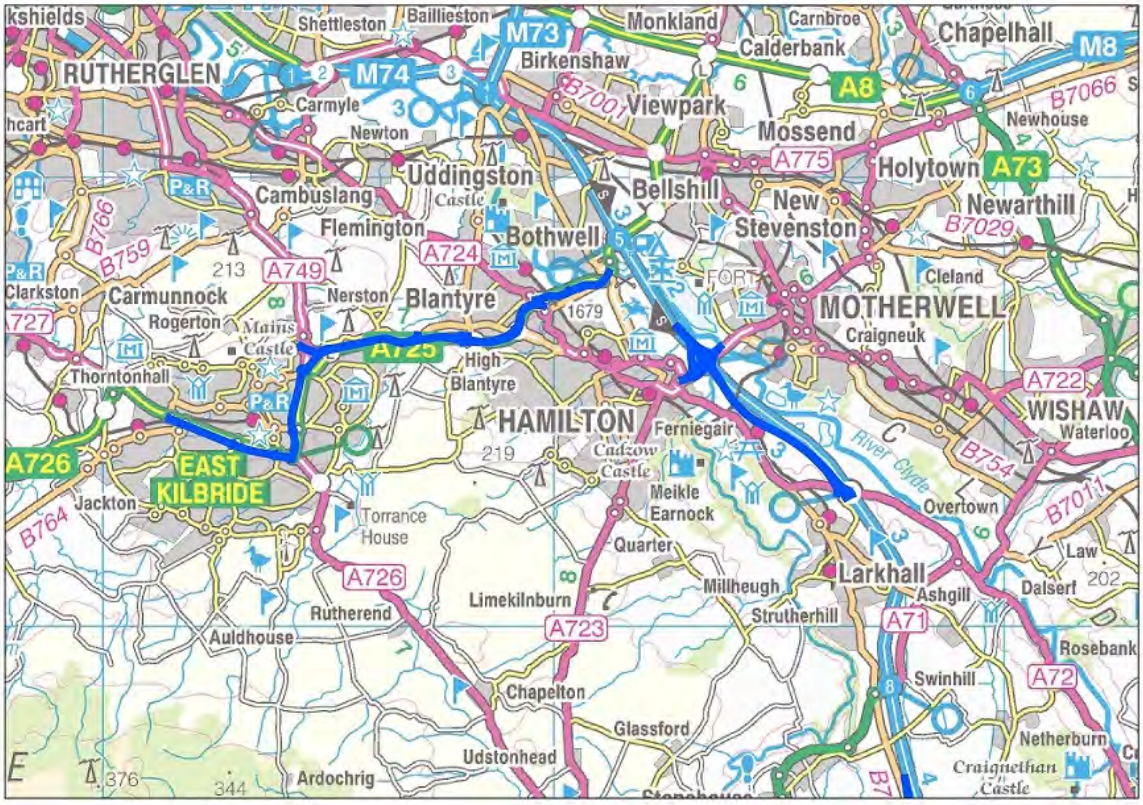
Appendix 2

Precautionary Treatment and Snow Ploughing Routes

Route	Depot	Vehicle Registration	Description	Depot to Route (km)	Time to Route (mins)	Total route length treated (km)	Average Speed (km/hr)	Route Time (mins)	Alternative Access	Average Width of Route (m)	Route Tonnage at 20 g/m^2 (T)	Route Tonnage at 40 g/m^2 (T)	Treatment Type
P1	Polmadie		A725 Whistleberry to A726 East Kilbride and M74 J6 area	15	20	44.3	25	106	Ayr	7.21	6.39	12.78	Pre-Wet
P2	Polmadie		M74 J1 - J3A	11	15	43.9	24	110	Ayr	7.20	6.32	12.64	Pre-Wet
P3	Polmadie		M8 J13 -J26 and M80	24	20	39.0	26	90	Ayr	7.50	5.85	11.70	Pre-Wet
P4	Polmadie		M74 J7 - J10	22	15	32.9	36	55	Ayr	7.23	4.76	9.51	Pre-Wet
P5	Polmadie		M74 J6 - J12	27	20	39.2	26	90	Ayr	7.05	5.53	11.06	Pre-Wet
P6	Polmadie		M8 J10 – J19 and M80	15	20	52.5	35	90	Ayr	7.50	7.88	15.75	Pre-Wet
P7	Polmadie		M8 J29 - M898 and A82	14	15	50.0	35	86	Ayr	7.31	7.31	14.62	Pre-Wet
P8	Polmadie		M8 J29 - J22 and A737 to Kilwinning	13	20	55.0	32	103	Ayr	7.40	8.14	16.28	Pre-Wet
P9	Polmadie		M8 J30 - A8 Cartsdyke roundabout and A82 slips	20	18	48.6	32	91	Ayr	7.03	6.83	13.67	Pre-Wet
P10	Polmadie		A737 slips and M8 J29 - J24	13	18	33.5	37	54	Ayr	7.50	5.03	10.05	Pre-Wet
P11	Polmadie		A78 Cartsdyke Greenock - Hunterston	38	40	38.9	45	97	Ayr	6.77	5.27	10.54	Pre-Wet
P12	Polmadie		M77	5	10	43.9	45	85	Ayr	7.66	6.72	13.44	Pre-Wet
P13	Polmadie		East Kilbride footways	10	20	10.0	9	70	Ayr	3			Brine/Potassium Acetate
P14	Polmadie		Erskine, Whitecart,	13	20	16.4	11	90	Ayr	5.3	1.4	2.8	Potassium Acetate

			Kingston and St-James										
A1	Ayr		A76 Crossroads – Carronbridge	16	30	63.0	35	108	Dumfries	6.54	8.24	16.48	Pre-Wet
A2	Ayr		A77 Ayr - Girvan	12	18	53.4	35	92	Stranraer	6.92	7.39	14.79	Pre-Wet
A3	Ayr		A77 Ayr - Kilmarnock , A76 Kilmarnock – Crossroads	6	10	55.8	36	93	Polmadie	7.25	8.10	16.20	Pre-Wet
A4	Ayr		A78 Ayr - Hunterston	8	10	56.0	45	75	Polmadie	6.49	7.27	14.54	Pre-Wet
A5	Ayr		A77 Maybole, and Girvan footways						Polmadie				Brine
A6	Ayr		A78 Largs footway						Polmadie				Brine
W1	Dumfries		A701/A76 Dumfries – Carronbridge	22	25	61.0	44	83	Dumfries	6.68	8.14	16.28	Pre-Wet
W2	Dumfries		A75 Dumfries – Gretna	3	6	51.1	39	79	Castle Douglas	6.95	7.10	14.21	Pre-Wet
CD1	Castle Douglas		A75 Newton – Dumfries	17	23	53.6	44	73	Dumfries	7.30	7.83	15.66	Pre-Wet
S1	Stranraer		A75/A751/A77 Stranraer – Girvan	3	6	62.3	35	107	Ayr	6.61	7.83	16.49	Pre-Wet
S2	Stranraer		A75 Stranraer - Newton	6	12	59.6	39	92	Castle Douglas	6.95	8.30	16.59	Pre-Wet

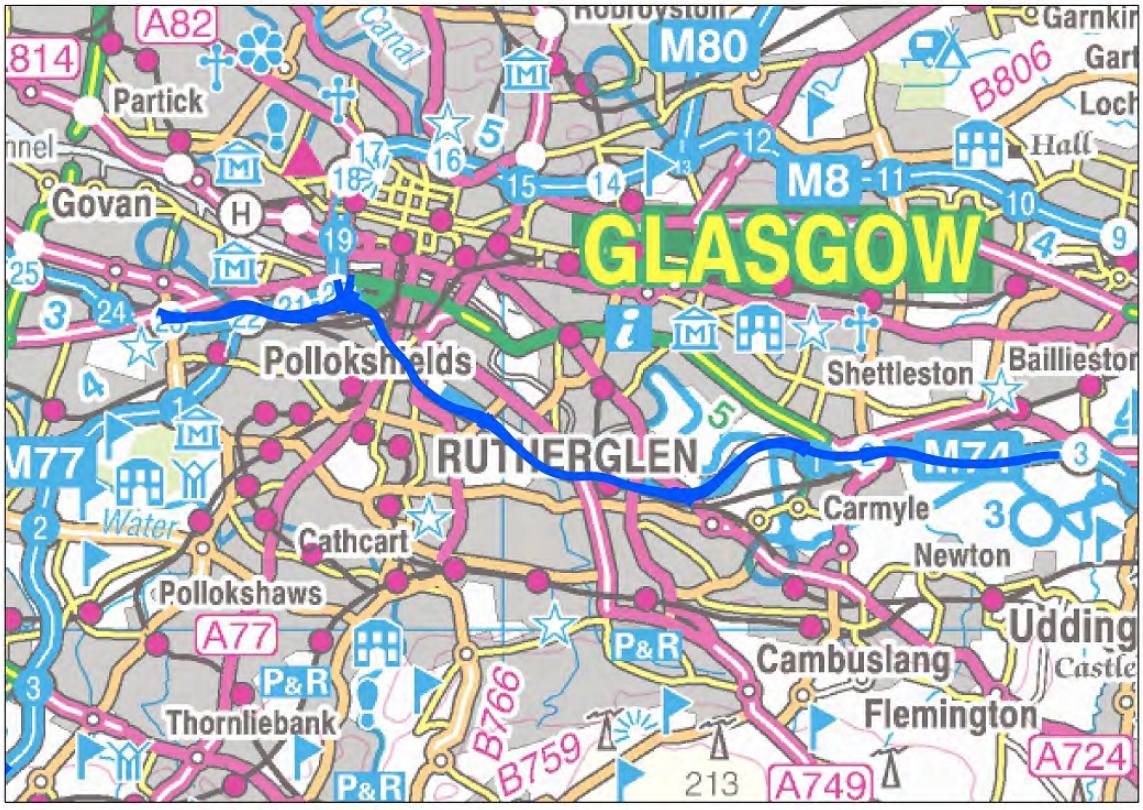
Route P1



Section ID	Stage	Route	Description
Section A	1	Travel	Leave depot and travel M74 to A725 Whistleberry roundabout
	2	Treat	Treat A725 from River Clyde bridge to Whirlies and then A726 to East Mains roundabout circulating roundabouts on route, include Whirlies bypass S/B and Treat A725 s/b to River clyde Bridge
	3	Travel	Travel A725 southbound to Whistleberry S/B offslip
	4	Treat	Treat A725 Whistleberry S/B off slip
	5	Travel	Travel Whistleberry Rd to Glasgow Rd
	6	Treat	Treat S/B on slip from Glasgow Rd
	7	Travel	Travel A725 to Main St S/B off slip
	8	Treat	Treat A725 Main St S/B off slip and S/B on slip, continue Treat through dedicated lane
	9	Treat	Treat S/B off slip at Douglas St and S/B on slip
	10	Travel	Travel A725 S/B to A725 / A749 Mavor Split (Bear right)
	11	Treat	Treat from A725 to A749 Mavor (turnabout Mavor)
	12	Treat	Treat from A749 Mavor to A725 Whirlies bypass join
	13	Travel	Travel A725 N/B to Hamilton Rd
	14	Treat	Treat N/B off slip to Hamilton Rd
	15	Travel	Travel Stoneymeadow Rd and rejoin A725 at Nerston Rd end and travel A725 N/B to off slip at Douglas St
	16	Treat	Treat N/B off slip at Douglas St and N/B on slip
	17	Travel	Travel A725 to Main St N/B off slip
	18	Treat	Treat A725 Main St N/B off slip and N/B on slip
	19	Travel	Travel A725 N/B to Craighead off slip
	20	Treat	Treat A725 N/B Craighead off slip
	21	Travel	Travel Craighead Rd to Whistleberry Rd to Glasgow Rd to roundabout at Forrest St, turn around to Glasgow Rd N/B onslip

Section ID	Stage	Route	Description
	22	Treat	Treat Glasgow Rd N/B on slip
	23	Travel	Travel A725 N/B to Craighead off slip
	24	Travel	Travel Craighead Rd to Whistleberry Rd to Glasgow Rd to roundabout at Forrest St, turn around to Glasgow Rd N/B onslip splitter
	25	Treat	Treat Glasgow Rd N/B on slip splitter
	26	Travel	Travel A725 to off slip at Craighead Rd, travel off slip
	27	Treat	Treat Craighead Rd N/B on slip
Section B	28	Travel	To M74 Jct 6 S/B off slip
	29	Treat	Main carriageway from Jct 6 S/B off slip to Jct 7 S/B off slip
	30	Treat	Junction 7 S/B offslip to right hand lane
	31	Travel	Turn right and return M74 N/B on slip Jct 7
	32	Treat	M74 Jct 7 on/slip to main c/way
	33	Travel	M74 Jct 6 N/B off slip to Hamilton
	34	Treat	M74 Jct 6 off slip to Hamilton N/B
	35	Travel	To roundabout and return to M74 S/B Jct 6 on slip from Hamilton
	36	Treat	M74 Jct 6 S/B on slip from Hamilton
	37	Travel/Treat	M74 S/B Jct 7 off slip **(Treat left hand lane at top of slip)** and return Jct 7 N/B on slip and travel to Jct 6 off/slip (caution when returning to N/B on slip from off slip)
	38	Treat	M/4 Jct 6 off slip to Motherwell N/B
	39	Travel	Turn to Airbles Rd, Tinkers Lane, A723 W/B To M74 N/B Jct 6
	40	Treat	M74 Jct 6 on slip N/B from Motherwell, treat lane 1 and hardshoulder to boundary with DBFO
	41	Travel	End of route, return to depot

Route P2



Section ID	Stage	Route	Description
Section A	1	Treat	Treat M74 Jct 1a S/B on slip
	2	Travel	Travel M74 S/B to Jct 2 off slip
	3	Treat	Treat M74 Jct 2 S/B off slip
	4	Treat	Treat M74 Jct 2 S/B on slip
	5	Travel	Travel southbound to Jct 2A off slip
	6	Treat	Treat M74 Jct 2A S/B off slip
	7	Treat	Treat M74 Jct 2A S/B on slip
	8	Travel	M74 N/B to A763 Jct 3
	9	Treat	M74 Jct 3 off slip to Carmyle then turn right
	10	Travel	A763 Carmyle to M74 S/B on slip
	11	Treat	M74 Jct 3 S/B on slip
	12	Travel	To M74 Jct 3A N/B on slip
	13	Treat	Treat M74 northbound from Jct 3a to M8 and slip road on to M8 lane 2 and 3 to Jct 23 off slip
	14	Travel	Travel M8 W/B to Jct 23 and U-turn and travel M8 E/B to start of M74 S/B carriageway
	15	Treat	Treat M74 S/B to M74 Jct 3a lanes 2 and 3
	16	Treat	Treat M74 N/B from Jct3 to Jct 1 hardshoulder and lane 1
	17	Treat	Treat M74 Jct 1 N/B off slip
	18	Travel	Travel Carnoustie St, Scotland St, West St and Wallace St to M74 S/B on slip
	19	Treat	Treat M74 Jct 1 S/B on slip

Section ID	Stage	Route	Description
	20	Treat	Treat M74 S/B to M74 Jct 3a hard shoulder and lane 1
	21	Travel	Travel to M74 Jct 2a N/B off slip
	22	Treat	Treat M74 Jct 2a N/B off slip
	23	Treat	Treat M74 Jct 2a N/B on slip
	24	Travel	Travel to M74 Jct 2 N/B off slip
	25	Treat	Treat M74 Jct 2 N/B off slip
	26	Treat	Treat M74 Jct 2 N/B on slip
	27	Travel	Travel to M74 Jct 1a N/B off slip
	28	Treat	Treat M74 Jct 1a N/B off and N/B on slip
	29	Travel	Travel to M74 N/B to Jct 1 and U-turn
	30	Travel	Travel M74 S/B to Jct 1a
	31	Treat	Treat M74 Jct 1a S/B off slip lanes 3 and 4
	32	Treat	Treat M74 Jct 1a splitter island at foot of S/B on slip
	33	Travel	Travel M74 S/B to Jct 2a and U-turn and travel M74 N/B to Jct 2
	34	Treat	Treat M74 N/B Jct 2 off slip splitter island at foot of slip road
	35	Travel	Travel Cambuslang Rd and U-turn where suitable
	36	Treat	Treat M74 Jct 2 splitter island at foot of N/B on slip
	37	Travel	Travel M74 N/B to Jct 1a
	38	Treat	Treat M74 N/B Jct 1a off slip splitter island at foot of slip road
	39	Travel	Travel Polmadie Rd and U-turn where suitable
	40	Treat	Treat M74 Jct 1a splitter island at foot of N/B on slip
	41	Travel	Travel M74 N/B to Jct 1 and U-turn and travel M74 S/B to Jct1a
	42	Treat	Treat M74 Jct 1a splitter island at foot of S/B off slip
	43	Travel	Travel Polmadie Rd and U-turn where suitable
	44	Travel	Travel M74 S/B to Jct 2
	45	Treat	Treat M74 S/B Jct 2 off slip splitter island at foot of slip road
	46	Travel	End of route, return to depot

Route P3

Section ID	Stage	Route	Description
Section A	1	Travel	Proceed to Jct 10 on slip
	2	Treat	H/S from Jct 10 on slip to Jct 11 off slip, Jct 11 off slip to on slip and Jct 11 on slip to Jct 12 off slip
	3	Treat	Prior to Jct 12 on slip move into lane 2. Remain in current lane to treat lanes 1, 2 and 3 (varies) to Kingston Bridge
	4	Travel	Kingston Bridge W/B
	5	Treat	M8 W/B from Kingston Bridge to Jct 24
	6	Treat	M8 Jct 24 W/B off and on slips
	7	Travel	Jct 24 W/B on slip to J25 W/B off slip
	8	Treat	Jct 25 W/B off and on slips
	9	Travel	M8 W/B to Jct 26 W/B off slip
	10	Treat	Jct 26 W/B full off and on slip
	11	Travel	W/B from Jct 26 to Jct27, turnabout Jct 27 and travel to Jct 26 E/B off slip
	12	Treat	M8 Jct 26 E/B offslip (lanes 3 and 4) and on slip
	13	Travel	To Jct 25 E/B off slip
	14	Treat	From Jct 25 off slip treat lanes 3 and 4 1 to M8 Kingston Bridge
	15	Travel	M8 Kingston Bridge E/B
	16	Treat	M8 E/B main carriageway after Kingston Bridge and off slip to Jct 17 Great Western Rd, then turn where appropriate
	17	Travel	Great Western Rd to Jct 17 E/B on slip
	18	Treat	M8 Jct17 E/B on slip to M8, and continue. Offside lane to E/B off slip at Jct 15 Castle St (traffic lights)
	19	Travel	Alexandra Parade and Glebe Street (right, and then right), Springburn Expressway (Stirling Rd) to M8 Jct 15 W/B on slip
	20	Treat	M8 W/B on slip from Stirling Road and main carriageway offside, continuing to Charing Cross off slip to the traffic lights
	21	Travel	Continue U-turn to St Georges Rd traffic ights and M8 Jct 18 E/B on slip
	22	Treat	M8 Jct 18 E/B on slip from Charing Cross and contine to treat lane 1 and hardshoulder to off slip to Kirkintilloch
	23	Treat	M8 Jct15 E/B off slip to Kirkintilloch
	24	Travel	Along Springburn Road to traffic lights. Turn right at traffic lights onto St Rollox Brae. Continue along St Rollox Brae to roundabout at Tesco.

Section ID	Stage	Route	Description
			Turn around and travel back to traffic lights. At traffic lights turn left onto Springburn Road and travel to loop U on slip
	25	Treat	M8 J15 Loop U W/B on slip and nearside lane, continuing to treat Jct 16 W/B off slip to traffic lights
	26	Travel	Right from traffic lights to M8 Jct 16 E/B on slip
	27	Treat	M8 Jct 16 E/B on slip to merge
	28	Travel	M8 E/B carriageway to Jct 14 E/B off slip
	29	Treat	M8 Jct 14 E/B off slip (blast at bottom)
	30	Travel	Turn left, travel Viewpark Avenue to roundabout, U-turn and return to Jct 14 W/B on slip
	31	Treat	M8 Jct 14 W/B on slip to merge
	32	Travel	Continue M8 W/B to Jct 15 Castle St off slip
	33	Treat	M8 Jct15 Castle St W/B off slip
	34	Travel	Turn right at traffic lights
	35	Treat	M8 Jct 15 Castle St E/B on slip and lane 1 and 2 to the M8 Jct 13 M80 N/B off slip
	36	Travel	M80 N/B, U-turn at Jct 2, M80 S/B to Jct 1 off slip
	37	Treat	M80 S/B carriageway from Jct 1 off slip to M8 main carriageway, continuing with lanes 1 and 2 (layby/hardshoulders) to off slip at Jct 15 Cathedral/Glasgow Cross.
	38	Travel	To Jct 13 W/B off slip
	39	Treat	Hardshoulder on M8 carriageway after Jct 13 off slip to Jct 13 on slip merge
	40	Travel	End of route, return to depot

Route P4

Section ID	Stage	Route	Description
Section A	1	Travel	M74 S/B Jct 7 to where off slip leaves, stay on main carriageway.
	2	Treat	M74 S/B and Jct 8 slip road off to (A71), turn left, treat hardshoulder, lanes 1 and 2
	3	Travel	A71 to B7078 roundabout, U-turn and return along A71 to slip on to M74 N/B
	4	Treat	Slip on from Jct 8 N/B and main carriageway between Jct 8 and where Jct 6 on slip merges.
Section B	5	Travel	Proceed to M74 Jct 8 (A71)
	6	Treat	Treat M74 S/B from Jct 8 off slip and slip off to B7078 (Jct 9)
	7	Travel	B7078 and M74 Jct 10 to slip on to M74 N/B
	8	Treat	Jct 10 on slip to M74 and M74 N/B main carriageway and slip off to A71 (Jct 8), turn right
	9	Travel	Travel to M74 Jct8 S/B on slip
	10	Treat	M74 S/B Jct 8 S/B on slip
	11	Travel	M74 S/B and slip off to B7078 Jct 9
	12	Treat	Treat left splitter at B7078 Jct 9 and then turn left
	13	Travel	End of route, return to depot

Route P5

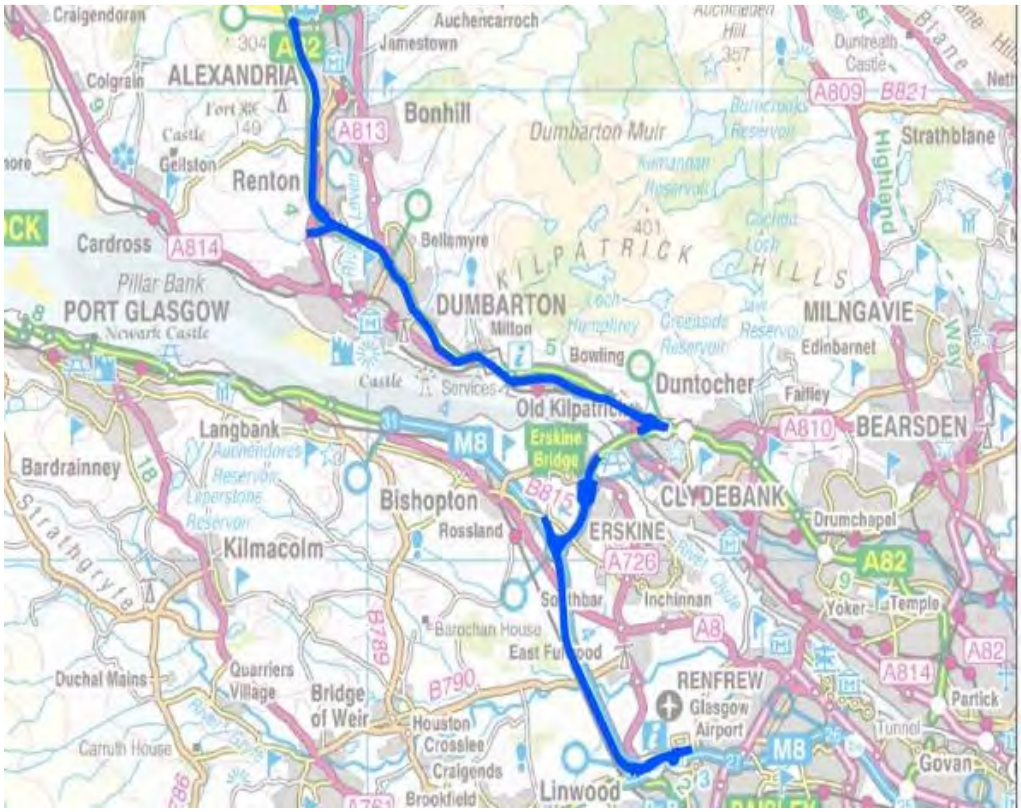
Section ID	Stage	Route	Description
Section A	1	Travel	Proceed to M74 Jct 6 S/B offslip
	2	Treat	Jct 6 S/B offslip to Motherwell
	3	Travel	Airbles Rd, Tinkers Lane, A723 WB to M74 Jct 6 S/B onslip
	4	Treat	M74 Jct 6 S/B onslip from Motherwell
	5	Travel	To M74 S/B Jct 8
Section B	6	Travel	Proceed S/B to M74 Jct 9 (B7078)
	7	Treat	M74 S/B to where A70 slip (Junction 12) joins from left
	8	Travel	M74 S/B to Jct 13 (A702), U-TURN around junction, return along M74 N/B to Jct 12 (A70)
	9	Treat	M74 N/B from Jct 12 and then off slip to Jct 10 (B7078) turn right
	10	Treat	Treat on slip to M74
	11	Travel	Travel M74 S/B to Jct 11 (B7078), bear left
	12	Treat	Treat off slip to B7078, turn right
	13	Travel	Travel B7078 to slip back on to M74 N/B, rurn right
	14	Treat	Treat on slip to M74 N/B
	15	Travel	Travel M74 N/B to Jct 10 (B7078), to where off slip leaves, stay on main carriageway
	16	Treat	Treat M74 N/B through Jct 10 to where B7078 on slip merges
	17	Travel	M74 N/B to Jct 8 to where off slip leaves, stay on main carriageway
Section A	18	Treat	Treat M74 N/B through Jct 8 to where A71 on slip merges
	19	Travel	M74 N/B to Jct 6 offslip
	20	Treat	Jct 6 N/B onslip from Hamilton
	21	Travel	To Jct 6 S/B offslip
	22	Treat	Jct 6 S/B offslip to Hamilton
	22	Travel	End of route, return to depot

Route P6

Section ID	Stage	Route	Description
Section A	1	Travel	Proceed to M8 Jct 10 DBFO boundary W/B
	2	Treat	M8 W/B to Jct 13 and then off slip onto M80 and M80 N/B main carriageway to 100m past Jct 2 N/B on slip (to boundary markers) hardshoulder, lanes 1 and 2
	3	Travel	Continue N/B Jct 3 Hornhill, bear left, off slip to roundabout. U-turn at roundabout and travel to Hornshill on slip to M80 S/B. Join main carriageway. M80 S/B to Jct 2 (B765), bear left
	4	Treat	M80 Jct 2 slip off, treat roundabout and under bridge deck, turn at roundabout and treat M80 S/B on slip
	5	Travel	M80 S/B from Jct 2 S/B on slip and M8 E/B to Jct 12 (A80). Bear left
	6	Treat	Slip off to B765 (Jct 12 E/B off))
	7	Travel	Over A80 onto B765 to slip on to M8
	8	Treat	Slip back on to A80 (Jct 12 E/B on slip) and continue to treat hardshoulder to Jct 11 off slip
	9	Treat	Off slip to B765 (Jct 11 E/B) and slip back onto M8 E/B
	10	Treat	Hardshoulder to Jct 10 off slip then treat Jct 10 E/B off slip.
	11	Travel	To Jct 11 W/B off slip
	12	Treat	Off slip to B765 (Jct 11) and slip back onto M8 W/B
	13	Travel	M8 W/B to Jct 12 (A80)
	14	Treat	Off slip to A80 (Jct 12) and slip back onto M8 W/B
	15	Treat	Continue to treat dedicated lane to Jct 13 off slip
	16	Travel	To M80 N/B to Jct 2 (B765)
	17	Treat	Off slip to B765 and slip back onto M80 N/B
	18	Travel	M80 N/B to Hornshill off slip to M80 S/B Hornshill on slip, M80 S/B carriageway.
	19	Treat	M80 main S/B carriageway from (Boundary Marker) 100m prior to Jct 2 off slip and main carriageway S/B to slip off to M8 E/B
	20	Travel	Over roundabout to M8 E/B on slip, turn left
	21	Treat	Slip onto M8 E/B and M8 main carriageway to Jct 10 E/B off slip.
	22	Travel	M8 Jct 10 and turn and travel M8 W/B to Jct 12

Section ID	Stage	Route	Description
	23	Treat	Hardshoulder between Jct 12 slips
	24	Travel	To M8 Jct 13 W/B off slip
	25	Treat	Hardshoulder between Jct 13 slips
	26	Travel	M8 Jct 15 W/B off slip and U-turn to M8 E/B carriageway
	27	Treat	M8 Jct 15 E/B Stirling Rd on slip
	28	Travel	Travel to Jct 14 E/B off slip
	29	Treat	M8 Jct 14 E/B off slip to the right
	30	Travel	Viewpark Avenue, Alexander Park Street, turn left Cumbernauld Rd, Alexandra Parade, turn right to Viewpark Avenue to M8 Jct 14 W/B on slip.
	31	Treat	Bottom of M8 Jct 14 W/B on slip
	32	Travel	M8 WB to Jct 17 W/B off slip
	33	Treat	M8 Jct 17 W/B off slip to West Graham St to traffic lights
	34	Travel	Right turn and turn about where appropriate, to Jct 17 W/B Gt Western Rd on slip
	35	Treat	M8 Jct 17 W/B on slip, dedicated lane and Jct 19 W/B off slip to Argyle St.
	36	Travel	Turn right to North St and Jct 19 E/B on slip
	37	Treat	M8 E/B Anderston on slip and nearside dedicated lane, continuing to E/B off slip to St Georges Road traffic lights.
	38	Travel	Turn Right and right again onto Garscube Road. Turn right onto New City Road on slip
	39	Treat	New City Road W/B on slip to Great Western Rd W/B on slip to main carriageway
	40	Travel	M8 W/B between Jct 17 and Jct19 E/B off slip, turn about to Jct 19 E/B on slip
	41	Treat	M8 main carriageway prior to Jct 17 E/B off slip (from crossover trail) to Jct 12 E/B off slip
	42	Treat	Hardshoulder between Jct 12 E/B slips
	43	Travel	To Jct 11 E/B off slip
	44	Treat	Hardshoulder between Jct 11 E/B slips
	45	Travel	End of route, return to depot

Route P7



Section ID	Stage	Status	Description
Section A	1	Travel	Depot to start of route at M8 W/B at western end of Whitecart Viaduct
	2	Treat	M8 W/B from end of Viaduct lanes offside and adjacent (becoming hard shoulder and lanes 1 & 2) to M898 off ramp
Section B	3	Treat	M898 off ramp to A898 Erskine Bridge
	4	Treat	M898 N/B and A898 N/B to start of Erskine Bridge
	5	Travel	A898 Erskine Bridge
	6	Treat	A898 off slip to A82 W/B
	7	Treat	A82 W/B becoming A82 N/B to Barloan Roundabout
Section C	8	Treat	A82 N/B to Stoneymollan Roundabout circulating all roundabouts on route
	9	Treat	A82 Stoneymollan to Renton S/B off slip
	10	Treat	Renton S/B off slip. At end of slip road turn right and U-turn where possible to return to Renton S/B on slip
	11	Treat	Renton S/B on slip and continue to treat A82 S/B carriageway to Lomondgate Roundabout
	12	Travel	U-turn at Lomondgate and travel to Renton N/B off slip
	13	Treat	A82 Renton N/B off slip to Renton
	14	Travel	A82 S/B to Lomondgate and U-turn and travel to Stoneymollan and U-turn and travel to Renton S/B off slip
	15	Treat	A82 between Renton s/b slip roads
	16	Travel	To Lomondgate Roundabout
Section B	17	Treat	A82 S/B, becoming E/B, from Lomondgate to A898 S/B on slip to Erskine Bridge
	18	Treat	A898 S/B on slip to Erskine Bridge from A82 E/B
	19	Travel	A898 S/B Erskine Bridge to end of bridge deck
Section A	20	Treat	A898 S/B becoming M898 S/B to M8 Jct 30
	21	Treat	M8 Jct 30 E/B on slip from M898 S/B

	22	Treat	M8 E/B from Jct 30 to point at which M8 White Cart Viaduct starts (hard shoulder, lanes 1 and 2) becoming offside and adjacent after Jct 29 E/B on slip
	23	Travel	M8 E/B to end of bridge deck (White Cart Viaduct)
	24	Treat	M8 E/B from end of White Cart Viaduct to end of M8 E/B Jct 27 on ramp lane 1 becoming hardshoulder and lane 1
	25	Travel	M8 E/B to Jct 26 off slip
	26	Treat	M8 E/B Jct 26 off slip hardshoulder becoming lanes 1 and 2 at end of slip
	27	Travel	M8 westbound to Jct 29a
	28	Treat	Jct 29a westbound off slip
	29	Travel	From end of off slip to Jct 29a Eastbound on slip
	30	Treat	Jct 29a Eastbound on slip
	31	Travel	End of route, return to depot

Route P8

Section ID	Stage	Status	Description
Section A	1	Travel	M74 N/B to M8 secondary carriageway to end of varioguard at M8 Jct 23
	2	Treat	M8 W/B from Jct 23 merge offside and adjacent to Jct 27 off slip
	3	Treat	M8 W/B from Jct 27 off slip to M8 Jct 27 on slip (bridge deck) lanes 1, 2 and 3
	4	Travel	M8 W/B to end of White Cart Viaduct Jct 28
	5	Treat	M8 W/B from end of White Cart Viaduct hardshoulder and lane 1 and continue to A737 hardshoulder, lanes 1 and 2 to point where Linclive viaduct bridge starts
	6	Travel	A737 W/B over Linclive Viaduct (acetate treated) to end of bridge deck.
	7	Treat	A737 W/B from end of bridge deck to Kilbarchan
Section B	8	Treat	A737 W/B from Kilbarchan to A737 Dalry, circulating all roundabouts on route
Section C	9	Treat	A737 W/B from Dalry to A737/A738 Howgate Jct, circulating all roundabouts on route
	10	Treat	A738 from Howgate Jctto A78/A738 Pennyburn Roundabout
	11	Treat	Pennyburn Roundabout and return to A737 Howgate junction Treatting splitters and dual section.
Section B	12	Travel	A738 and A737 to new by pass
	13	Treat	New by pass from Hillhead Rbt to Highfeild roundabout

	14	Travel	A737 to start of dual carriageway section at Kilbarchan High Wall section treatting all splitters on return
	15	Treat	A737 E/B from High Wall at Kilbarchan lane gain to end of A737 E/B on slip from Kilbarchan
Section A	16	Treat	Jct 27 E/B on slip (Arkleston) including hardshoulder
	17	Treat	M8 E/B to J26 Hillington off slip hardshoulder and lane 1, **stay on main carriageway**
	18	Treat	M8 E/B from Jct 26 Hillington off slip to where Jct 25A Braehead on slip merges lane 1
	19	Treat	M8 E/B from Jct 25A Braehead on slip merge to Jct 25 Clyde tunnel off slip hardshoulder, lane 1 and 2
	20	Treat	Jct 25 Clyde Tunnel off slip to end of slip
	21	Travel	Through Tunnel and U-turn and travel to M8 Jct 25 E/B Tunnel on slip
	22	Treat	M8 Jct 25 Clyde Tunnel E/B on slip including hardshoulder to Jct 24
	23	Treat	M8 E/B Jct 24 off slip including hardshoulder
	24	Treat	M8 E/B Jct 24 on slip including hardshoulder
	25	Treat	M8 E/B hardshoulder and lanes 1 and 2 from Jct 24 on slip to Jct 22 off slip to Seaward St (secondary carriageway)
	26	Treat	M8 E/B off slip to Seaward St to roundabout
	27	Treat	M8 W/B on slip from Jct 22 Seaward St including hard shoulder
	28	Travel	Travel to Jct 26, traverse roundabout and rejoin M8 E/B
	29	Treat	M8 E/B main carriageway lanes 1 and 2 Jct 24 E/B off slip to Jct 24 E/B on slip
	30	Travel	End of route, return to depot

Route P9

Section ID	Stage	Status	Description
Section A	1	Travel	Travel to start of route at M8 W/B Jct 29 off slip
	2	Treat	M8 W/B Jct 29 off slip including hardshoulder
	3	Treat	M8 W/B Jct 29 on slip including hardshoulder
	4	Travel	M8 W/B to point where M8 W/B Jct 30 exits M8
	5	Treat	M8 W/B Jct 30 off slip to A8 Langbank roundabout, circulate roundabout
	6	Treat	A8 W/B to Cartsdyke (McDonalds) roundabout and U-turn
	7	Treat	A8 E/B to M8 Langbank
	8	Treat	M8 E/B to Jct 30 E/B off slip to M898 N/B
Section B	9	Treat	M8 Jct 30 E/B off slip to M898 N/B
	10	Travel	Travel M898 N/B to Spectacles off slip
	11	Treat	M898 N/B to Spectacles off slip
	12	Treat	On ramp from Spectacles to A898 N/B
	13	Travel	Travel M898 N/B becoming A898 to end of Erskine Bridge deck
	14	Treat	A898 N/B off slip to A82 E/B
	15	Travel	Travel A82 S/B, U-turn at Dalnotter Cemetery and travel to A82 W/B off slip to A898 and **stay on main carriageway**
	16	Treat	A82 N/B between slip roads to point where A898 on slip from Erskine bridge joins A82 W/B
	17	Travel	Travel A82 W/B U-turn at Dunglass roundabout and travel to A82 E/B off slip to A898 and **stay on main carriageway**
	18	Treat	A82 E/B between slip roads where A898 N/B off slip from Erskine bridge joins A82 E/B
	19	Travel	Travel A82 S/B U-turn at Dalnotter Cemetery and travel to A82 N/B off slip to A898
	20	Treat	A898 on slip to Erskine Bridge from A82 W/B to start of bridge deck
	21	Travel	Travel A898 to A898 S/B off slip to Spectacles
	22	Treat	A898 S/B off slip to Spectacles
	23	Treat	M898 On slip from spectacles to M898
	24	Travel	Travel M898 to M8 Jct 30 W/B on slip
	25	Treat	M8 Jct 30 W/B on slip from M898 S/B
Section A	26	Travel	Travel M8 W/B to Jct 31W/B off slip
	27	Treat	M8 W/B Jct 31 off and on slips (Westferry)
	28	Travel	Travel A8 W/B to Langbank roundabout U-turn and travel M8 E/B to Jct 31 Westferry off slip
	29	Treat	M8 E/B Jct 31 off and on slips

Section ID	Stage	Status	Description
	30	Travel	Travel M8 E/B to Jct 30 off slip and **stay on main carriageway**
	31	Treat	M8 E/B Jct 30 between off and on slips
	32	Travel	M8 E/B to junction 29 off slip
	33	Treat	M8 Jct 29 E/B off slip including hardshoulder
	34	Treat	M8 Jct 29 E/B on slip including hardshoulder
	35	Travel	End of route, return to depot

Route P10

Section ID	Stage	Status	Description
Section A	1	Travel	Depot to M8 secondary carriageway
	2	Treat	From Carnoustie St onslip lanes 3 and 4 (becoming lanes 1 and 2) to Dumbreck Road overbridge
	3	Treat	M8 from end of Jct 24 on slip to Jct 27 W/B off slip lanes 1 and 2
	4	Treat	Jct 25A off slip to Braehead and M8 jct 25A E/B on slip
	5	Treat	M8 E/B from where Jct 25 off slip departs to where M8 Jct 25 on slip joins M8, hardshoulder and lane 1
	6	Travel	M8 E/B to Jct 24 and return M8 W/B
	7	Treat	Jct 25A off slip to Jct 26 off slip hardshoulder and lane 1. Lane 1 through Jct 26 slips, hardshoulder and lane 1 to Jct 27 W/B off slip
	8	Treat	Jct 27 W/B off slip (Arkleston)
	9	Treat	M8 Jct 27 W/B on slip
	10	Travel	M8 W/B to Jct 28 off slip
	11	Treat	M8 Jct 28 W/B off slip
	12	Treat	M8 jct 28 E/B on slip
	13	Travel	M8 E/B to Jct 27 E/B off slip
	14	Treat	M8 Jct 27 E/B off slip
	15	Travel	M8 W/B then A737 W/B to A737 W/B Linwood off slip
	16	Treat	W/B off and on slip A737 Linwood
	17	Travel	A737 W/B to Johnstone off slip
	18	Treat	W/B off and on slips A737 Johnstone
	19	Travel	A737 W/B to Kilbarchan off slip
	20	Treat	W/B off slip to Kilbarchan B787
	21	Travel	A737 to E/B on slip from Kilbarchan
	22	Treat	A737 E/B on slip from Kilbarchan B787
	23	Travel	A737 E/B to Johnstone Interchange
	24	Treat	A737 E/B off and on slips A737 Johnstone
	25	Travel	A737 E/B to linwood off slip
	26	Treat	A737 E/B off and on slip A737 Linwood
	27	Travel	A737 E/B to St James off slip
	28	Treat	A737 E/B off slip to St James
	29	Treat	A737 St James Interchange roundabout
	30	Treat	A737 W/B St James on slip
	31	Travel	A737 W/B to Kilbarchan and return, A737 E/B to end of A737 Kilbarchan E/B on slip

Section ID	Stage	Status	Description
	32	Treat	A737 E/B from Kilbarchan on slip to M8 E/B on slip at Linclive Viaduct
	33	Travel	M8 E/B Linclive Viaduct (acetate treated)
	34	Treat	M8 E/B Jct 28A (end of Linclive viaduct) to start of White Cart Viaduct hardshoulder, lanes 1 and 2
	35	Travel	M8 E/B White Cart Viaduct bridge deck
	36	Treat	M8 E/B from end of bridge deck to Dumbreck Road Overbridge offside and adjacent lanes
	37	Travel	End of route, return to depot

Route P11

Section ID	Stage	Status	Description
Section A	1	Travel	Leave depot and travel to Cartsdyke Roundabout A8 W/B
	2	Treat	A8 W/B from Cartsdyke Roundabout to Bullring Roundabout
	3	Treat	A8 E/B to Cartsdyke Roundabout
	4	Travel	A8 W/B to Bullring Roundabout and bear left
	5	Treat	A78 south from Bullring Roundabout to Dunlop St Roundabout and return A78 E/B to Bullring circulating all roundabouts and treating splitter islands and wide sections
Section B	6	Travel	A78 W/B to Dunlop St Roundabout
	7	Treat	A78 S/B to Bankfield Roundabout and U-turn
	8	Treat	A78 N/B to Dunlop St roundabout treating dual carriageway sections and splitters islands
	9	Travel	U-turn at Dunlop St Roundabout and return to Bankfoot Roundabout
Section C	10	Treat	A78 S/B from Bankfoot Roundabout to Hunterston Power Station Roundabout, circulating Ore Terminal Roundabout on route and turn and treat splitter island
	11	Travel	A78 north to Ore Terminal Roundabout
	12	Treat	N/B splitter island on approach and departure of roundabout
	13	Travel	A78 northbound to Largs
	14	Treat	Splitter islands at approach and departure of Morrisons and railway station roundabouts
	15	Treat	A78 northbound through Largs
	16	Travel	A78 northbound to Fery Terminal Wemyss Bay
	17	Treat	A78 northbound through Wemyss Bay Ferry Terminal
	18	Travel	A78 northbound to Bankfoot Roundabout
	19	Treat	Approach to Bankfoot Roundabout
	20	Travel	End of route, return to depot

Route P12

Section ID	Stage	Status	Description
Section A	1	Travel	Depot to start of route M8 Jct 23 W/B off slip
	2	Treat	M8 Jct 23 W/B off slip and W/B on slip including hardshoulder
	3	Travel	To M8 secondary carriageway from where Jct 22 Seaward St exits
	4	Treat	M8 E/B secondary carriageway from point where Jct 22 Seaward St exits secondary carriageway to end of secondary carriageway at Harry Ramsdens
	5	Travel	M8 W/B secondary carriageway Scotland St on ramp
	6	Treat	M8 secondary carriageway from Scotland St on ramp to point M77 splits from secondary carriageway
	7	Treat	M77S/B on slip to M77 S/B Jct 1 off slip dedicated lane
	8	Treat	M77 S/B off slip Jct 1 including dedicated lane
	9	Travel	N/B on slip Jct 1
	10	Treat	M77 N/B on slip Jct 1
	11	Treat	M77 N/B from Jct 1 on slip to Kingston Bridge (treat main carriageway to M77/M8 on slip then treat hardshoulder to Kingston Bridge only)
	12	Travel	M8 W/B off slip and return from Waterloo St on ramp.
	13	Treat	Hardshoulder from Kingston Bridge to M77 off slip
	14	Treat	Off slip to M77 from M8 and continue to treat M77 S/B carriageway to Jct 3
Section B	15	Treat	M77 S/B from Jct 3 to M77 Jct 5 off slip
	16	Travel	M77 Jct 5 N/B on slip
	17	Treat	M77 N/B from Jct 5 to end of Jct 3
Section A	18	Treat	M77 N/B from Jct3 to end of M77. Continue to treat to Jct 1 N/B offslip
	19	Treat	M77 N/B off slip Jct 1

Section ID	Stage	Status	Description
	20	Travel	M77 S/B on slip Jct 1
	21	Treat	M77 S/B on slip Jct 1
	22	Travel	M77 S/B off slip Jct 2
	23	Treat	M77 S/B off slip Jct 2
	24	Travel	M77 N/B on slip Jct 2
	25	Treat	M77 N/B on slip Jct 2
	26	Travel	M77 S/B off slip Jct 3
	27	Treat	M77 S/B off slip Jct 3
	28	Travel	M77 Jct 3 S/B on slip
	29	Treat	M77 Jct 3 S/B on slip
Section B	30	Treat	M77 S/B climbing lane from Jct 3 to Jct 4, hardshoulder and lane 1
	31	Treat	M77 Jct 4 S/B off slip
	32	Travel	M77 N/B on slip Jct 4
	33	Treat	M77 N/B on slip Jct 4
Section A	34	Travel	M77 N/B off slip Jct 3
	35	Treat	M77 N/B off slip and N/B on slip Jct 3
	36	Travel	M77 N/B off slip Jct 2
	37	Treat	M77 N/B off slip Jct 2
	38	Travel	M77 S/B on slip Jct 2
	39	Treat	M77 S/B on slip Jct 2
	40	Travel	M77 S/B to Jct 3 off slip
	41	Treat	M77 N/B onslip (Jct 3 splitter)
	42	Travel	M77 N/B to Jct 2 off slip
	43	Treat	M77 N/B onslip (Jct 2 splitter)
	44	Travel	M77 N/B to Jct 1 off slip
	45	Treat	From Jct 1 off slip to o nslip main carriageway
	46	Travel	M77 N/B to off slip to secondary carriageway
	47	Treat	Off slip to secondary carriageway
	48	Treat	Seaward St dedicated off side loop
	49	Travel	To M8 Jct 24 W/B off slip
	50	Treat	M8 W/B between Jct 24 off slip and Jct 24 on slip lanes 1 and 2
	51	Travel	M8 W/B to Jct 26 off slip
	52	Treat	M8 W/B Jct 26 off slip dedicated split lane, bear left at end of slip road to Hillington
	53	Travel	End of route return to depot

Route P13

Section ID	Stage	Route	Description
Section A	1	Travel	Proceed to Whirlies roundabout
	2	Treat	Footway westbound from Whirlies up Kingsway to junction with Queensway and then along Queensway to junction with B761, West Mains Rd.
	3	Travel	U turn.
	4	Treat	Footway eastbound Queensway to junction with Kingsway and then along Kingsway to Whirlies roundabout.
	5	Travel	Treatment Ends.

This route treats 2 No. A726 Footbridges with Potassium Acetate

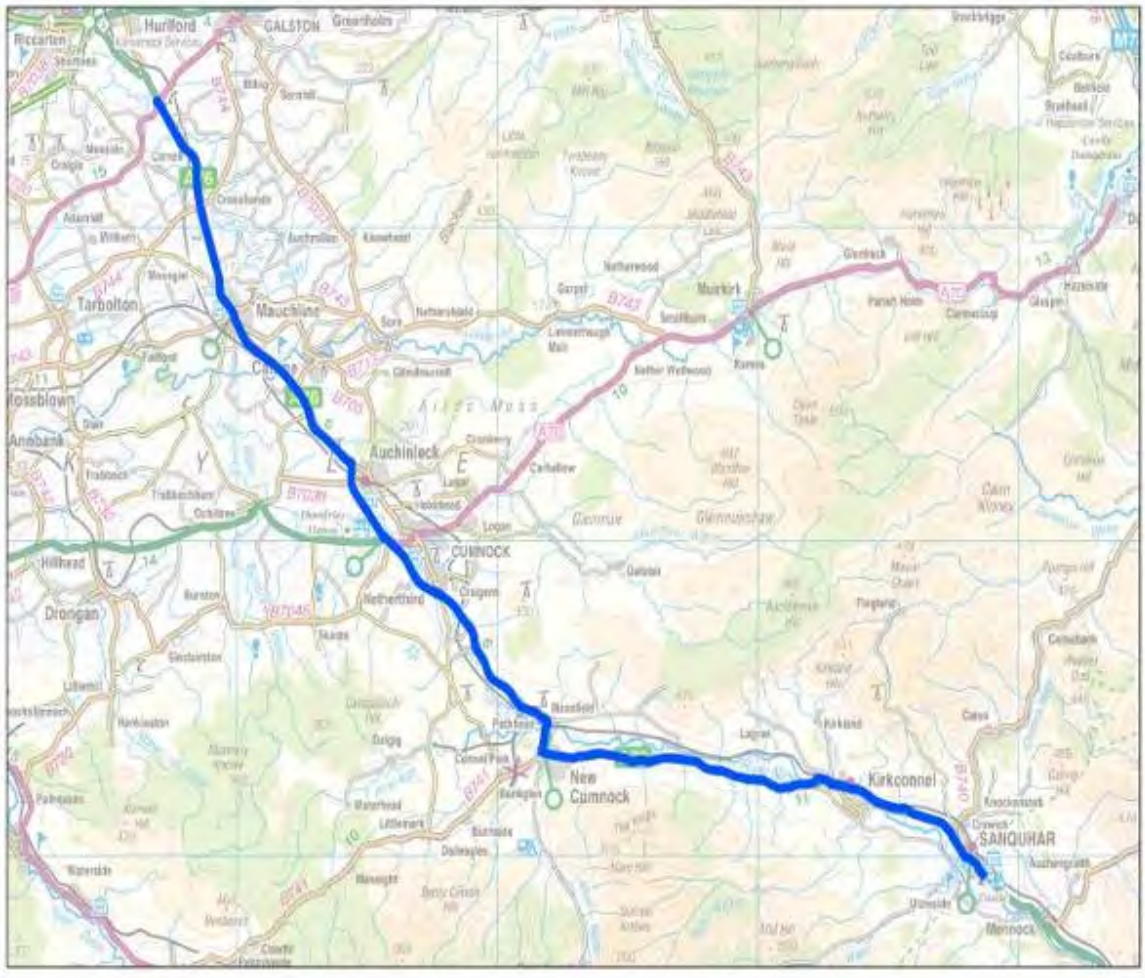
Route P14

Section ID	Stage	Route	Description
Section A	1	Travel	Exit Polmadie Depot, turn left
	2	Travel	West along New Rutherglen Road, circle roundabout and return East along New Rutherglen Road to the traffic lights
	3	Travel	Turn right at traffic lights onto Polmadie Road and turn right onto the M74 Northbound c/way at the slip road
	4	Travel	North on the M74 and then West on the M8 to the start of the Whitecart Viaduct at Junction 27 Arkleston
	5	Spray	Travelling in Lane 2, spray lanes 2 & 3 of the westbound c/way over the Whitecart Viaduct
	6	Travel	Westbound on the M8 to Junction 30 Erskine Bridge W/B off slip
	7	Travel	Northbound on the M898 to the start of the Erskine Bridge
Section B	8	Spray	Spray the Northbound c/way over the Erskine Bridge
	9	Travel	Eastbound on the A82 to Mountblow Flyover and return on the A82 w/b c/way to the S/B slip to the Erskine Bridge
	10	Travel	Southbound on the A898 to the start of the Erskine Bridge
	11	Spray	Spray the southbound c/way over the Erskine Bridge
	12	Travel	Southbound on the M898 to the e/b on slip to the M8
	13	Travel	Eastbound on the M8 to the start of the Whitecart Viaduct
Section A	14	Spray	Travelling in Lane 2, spray lanes 2 & 3 of the eastbound c/way over the Whitecart Viaduct
	15	Travel	Eastbound on M8 to J26 Hillington e/b off slip, circle Hillington roundabout and re-join the M8 via the J26 Hillington w/b on slip
	16	Travel	Westbound on the M8 to the start of the Whitecart Viaduct
	17	Spray	Spray lane 1 over the westbound c/way of the Whitecart Viaduct
	18	Travel	From the Whitecart Viaduct to the A737 Westbound off slip (J28 A)

Section ID	Stage	Route	Description
	19	Spray	Spray the westbound c/way of the A737 over the St. James Interchange
	20	Travel	Westbound on the A737 to the Linwood off slip, circle the roundabout and return on the A737 eastbound c/way to the start of the St. James Interchange
	21	Spray	Spray the eastbound c/way over the St. James Interchange
	22	Travel	From the end of St. James Interchange to start of the Whitecart Viaduct
	23	Spray	Spray lane 1 over the eastbound c/way of the Whitecart Viaduct
	24	Travel	Eastbound on the M8 to the start of the Kingston Bridge
	25	Spray	Travelling in the middle lane, spray lanes 4 & 5 of the eastbound c/way of the Kingston Bridge
	26	Travel	Eastbound on the M8 to J18 St. Georges Road e/b off slip
	27	Travel	At the traffic lights, turn right onto St. Georges Road, right onto the New City Road and right onto J17 Phoenix w/b on slip to the M8
	28	Travel	Travelling in the middle lane to the start of the Kingston Bridge w/b c/way (adjacent to Anderston w/b off slip)
	29	Spray	Travelling in lane 4,spray lanes 4 & 5 of the westbound c/way over the Kingston Bridge
	30	Travel	Westbound on the M8 to J24 Helen Street w/b off slip
	31	Travel	Exit to slip road, turn right at the traffic lights onto Helen Street and right onto J24 Helen Street e/b on slip
	32	Travel	Eastbound on the M8 to the start of the Kingston Bridge
	33	Spray	Travelling in lane 3 (which is the nearside lane),spray lane 3 to the Bothwell Street e/b off slip
	34	Spray	Spray both lanes of the Bothwell Street eastbound off slip to the traffic lights (travelling in lane 2)
	35	Travel	Continue straight onto Bothwell Street, turn right onto Blythswood Street and right onto Waterloo Street
	36	Travel	Continue to the start of Waterloo Street w/b on slip (at Douglas Street)
	37	Spray	Spray Waterloo Street w/b on slip
	38	Spray	Staying in lane 2, spray Lanes 2 and 3 over the w/b c/way of the Kingston Bridge to the West Street off slip
	39	Spray	Travelling in lane 2 of the West Street w/b off slip, spray both lanes of the slip road to the traffic lights
	40	Travel	At the traffic lights on the West Street off slip, turn right onto Wallace Street, right onto Tradeston Street, right onto Cook Street and continue to the start of the J20 West Street e/b on slip
	41	Spray	Travelling in Lane 1, spray both lanes of the West Street e/b on slip
	42	Spray	Staying in Lane 1, spray Lanes 1 and 2 over the e/b c/way of the Kingston Bridge
	43	Spray	Spray Stobcross e/b off slip down to the Clydeside Expressway
	44	Travel	Westbound on the Clydeside Expressway and exit at the Finnieston off slip
	45	Travel	Turn left at the traffic lights onto Finnieston Road and then right into Stobcross Road, circle the Hydro car park and return to the n/b c/way of Finnieston Street to rejoin the e/b c/way of the Clydeside Expressway
	46	Travel	Clydeside Expressway to the start of the Stobcross w/b on slip to the Kingston Bridge
	47	Spray	Spray the Stobcross w/b on slip until its merge with the Waterloo Street w/b on slip and continue spraying lane 1 over the westbound c/way of the Kingston Bridge until the start of the West Street w/b off slip
	48	Travel	West Street w/b off slip (travelling in Lane 2)
	49	Travel	At the traffic lights on the West Street off slip, turn right onto Wallace Street, right onto Tradeston Street, right onto Cook Street and continue to the start of the J20 West Street e/b on slip
	50	Travel	Lane 2 of the West Street e/b on slip

Section ID	Stage	Route	Description
	51	Spray	Spray the offside dead area of the West Street on slip until the start of the varioguard on the Kingston Bridge
	52	Travel	Travel in Lane 2 over the Kingston Bridge towards the Bothwell Street e/b off slip
	53	Spray	From opposite the start of the Stobcross e/b off slip, spray Lane 2 to 50 metres onto the Bothwell Street e/b off slip
	54	Travel	Travel in nearside lane of the Bothwell Street e/b off slip to the traffic lights
	55	Spray	At the traffic lights, spray the left turning lane into Pitt Street
	56	Travel	Pitt Street, turn left onto St. Vincent Street and left onto Newton Street to the start of the Newton Street w/b on slip
	57	Spray	Spray Newton Street w/b on slip until its merge with Waterloo Street w/b on slip
	58	Travel	Westbound over the Kingston Bridge and exit via West Street w/b off slip (travelling in lane 2)
	59	Travel	At the traffic lights on the West Street off slip, turn right onto Wallace Street, right onto Tradeston Street, right onto Cook Street and continue to the start of the J20 West Street e/b on slip
	60	Travel	Travel in Lane 2 of the West Street e/b on slip and over the Kingston Bridge towards the North Street e/b off slip
	61	Spray	Spray the North Street e/b off slip from the start of the Bothwell Street e/b off slip to its merge with North Street
	62	Travel	North Street, turn right onto St. Vincent Street, turn right onto Newton Street and join the M8 w/b c/way
	63	Travel	Travel in lane 3 over the westbound c/way of the Kingston Bridge
	64	Spray	Spray lane 3 from the start of the West Street w/b off slip to the end of the Kingston Bridge
	65	Travel	Westbound on the M8 then southbound on the M77 to J1 Dumbreck S/B off slip. At the traffic lights turn right onto Dumbreck Road and then right onto the M77 northbound c/way.
	66	Travel	M77 northbound c/way to M74 S/B c/way to J1A Polmadie S/B off slip
	67	Travel	At the traffic lights on the Polmadie off slip, turn left onto Polmadie Road, left onto New Rutherglen Road and left into Polmadie Depot. End of Route

Route A1



Section ID	Stage	Status	Description
Section A	1	Travel	Exit Ayr Depot and turn left onto A77 Northbound carriageway
	2	Travel	At Sandyford Toll Roundabout take the 3rd exit to B742/A719
	3	Travel	Immediately after exiting Sandyford Toll Roundabout take 1st left onto A719
	4	Travel	Travel along A719 to Crossroads Roundabout
	5	Treat	At Crossroads Roundabout Treat full roundabout in nearside lane then continue A76 Southbound to Crosshands
Section B	6	Treat	Treat A76 Southbound through Crosshands and Mauchline to Catrine junction
Section C	7	Treat	Treat A76 south to Templeton Roundabout Treat full roundabout in nearside lane then continue A76 Southbound
	8	Treat	Treat A76 Southbound to Dettingen Roundabout
	9	Treat	At Dettingen Roundabout Treat full roundabout in nearside lane then continue A76 Southbound
	10	Treat	Treat A76 Southbound to Skerrington Roundabout
	11	Treat	At Skerrington Roundabout Treat full roundabout in nearside lane then continue A76 Southbound
	12	Treat	Treat A76 Southbound to Garleffan Roundabout
	13	Treat	At Garleffan Roundabout Treat full roundabout in nearside lane then continue A76 Southbound
	14	Treat	Treat A76 Southbound through Pathead, New Cumnock to B741 Dalmellington roundabout

Section ID	Stage	Status	Description
Section D	15	Treat	Treat A76 Southbound from Dalmellington roundabout to A76 Crawick Bridge – A76 Sanquar (South) 30mph – A76 Mennock (North) 30mph A76 Mennock (North) – A76 Glenairlie start of 3 lanes - Carronbridge north of Thornhill.
	16	Travel	Stop treating at Carronbridge but continue southbound to Thornhill and circle roundabout and travel A76 northbound.
Section C	17	Travel	Travel North on A76 through Kirkconnel, New Cumnock and Pathead to Garleffan Roundabout.
	18	Treat	Treat splitter island at south of Garleffan Roundabout
	19	Travel	At Garleffan Roundabout take 2nd exit A76 Northbound
	20	Treat	Treat splitter island at north of Garleffan Roundabout
	21	Travel	Travel North on A76 to Skerrington Roundabout.
	22	Treat	Treat splitter island at south of Skerrington Roundabout
	23	Travel	At Skerrington Roundabout take 2nd exit A76 Northbound
	24	Treat	Treat splitter island at north of Skerrington Roundabout
	25	Travel	Travel North on A76 to Dettingen Roundabout.
	26	Treat	Treat splitter island at south of Dettington Roundabout
	27	Travel	At Dettington Roundabout take 2nd exit A76 Northbound
	28	Treat	Treat splitter island at north of Dettington Roundabout
	29	Travel	Travel North on A76 to Templeton Roundabout.
	30	Treat	Treat splitter island at south of Templeton Roundabout
	31	Travel	At Templeton Roundabout take 1st exit A76 Northbound
	32	Treat	Treat splitter island at north of Templeton Roundabout
Section A	33	Travel	Travel North on A76 through Mauchline and Crosshands to Crossroads Roundabout
	34	Treat	Treat splitter island at south of Crossroads Roundabout
	35	Travel	At Crossroads Roundabout take 1st exit A76 Northbound
	36	Treat	Treat splitter island at A719 exit of Crossroads Roundabout
	37	Travel	End of route return to Ayr Depot.

Route A2

Section ID	Stage	Status	Description
Section A	1	Treat	Leave Ayr depot
	2	Treat	A77 N/B carriageway to Sandyford Toll
	3	Treat	Sandyford Toll and continue A77 Northbound
	4	Treat	A77 Northbound carriageway to Dutch House Roundabout
	5	Treat	Dutch House Roundabout and continue on to A77 Southbound carriageway
	6	Treat	A77 S/B carriageway to Sandyford Toll
	7	Travel	At Sandyford Toll take the second exit to A77 S/B carriageway
	8	Treat	A77 S/B carriageway to Whitletts Roundabout
	9	Treat	Approach Whitletts Roundabout in the nearside lane
	10	Treat	Whitletts Roundabout in nearside lane and continue on to A77 S/B carriageway
	11	Treat	A77 S/B carriageway to Holmston Roundabout
	12	Treat	Holmston Roundabout and continue on to A77 S/B carriageway
	13	Treat	A77 S/B carriageway to Bankfield Roundabout
	14	Treat	Bankfield Roundabout and continue on to A77 S/B carriageway
	15	Treat	A77 S/B carriageway through Minishant to Maybole Cross
Section B	16	Treat	A77 S/B carriageway from Maybole Cross to Kirkoswald and Turnberry
Section C	17	Treat	A77 S/B carriageway from Turnberry to Bridgemill Roundabout at Girvan
	18	Treat	Bridgemill Roundabout and continue on to A77 S/B carriageway

	19	Treat	A77 S/B carriageway to traffic lights. Continue straight through Dalrymple Street and Glendoune Street to mini roundabout.
	20	Treat	Take 1st exit at mini roundabout to A77 S/B carriageway.
	21	Treat	A77 S/B carriageway to Shallochpark Roundabout
	22	Treat	Shallochpark Roundabout and splitter to A77 N/B carriageway
	23	Travel	A77 N/B carriageway to mini roundabout
	24	Treat	Mini roundabout and continue along Henrietta Street to roundabout
	25	Treat	Take 2nd exit on roundabout and continue treating to traffic lights on Knockcushan St
	26	Travel	Turn left at traffic lights and travel A77 N/B carriageway to Bridgemill Roundabout
	27	Treat	Splitters at Bridgemill Roundabout
Section A	28	Travel	A77 N/B through Turnberry, Kirkoswald, Maybole and Minishant to Bankfield Roundabout
	29	Treat	Splitters at Bankfield Roundabout
	30	Travel	A77 N/B carriageway to Holmston Roundabout
	31	Treat	Splitters at Holmston Roundabout
	32	Travel	A77 N/B carriageway to Whitletts Roundabout
	33	Treat	Splitters at Whitletts Roundabout
	34	Treat	A77 N/B carriageway to Ayr Depot Jct
	35	Treat	Turn left to Ayr depot at Jct

Route A3

Section ID	Stage	Status	Description
Section A	1	Travel	Travel from Ayr depot to Dutchhouse Roundabout
	2	Treat	A77 N/B to Spittalhill interchange
Section B	3	Treat	A77 N/B from Spittalhill interchange to Bellfield interchange
Section C	4	Treat	A77 N/B from Bellfield interchange to Connect Boundary at Meiklewood Interchange
	5	Travel	Travel round Meiklewood Interchange to A77 S/B at end of slip road
	6	Treat	A77 S/B from Boundary to Bellfield Interchange
Section B	7	Treat	A77 S/B from Bellfield Interchange to Spittallhill interchange
Section A	8	Treat	A77 S/B from Spittallhill to Dutchhouse Roundabout
	9	Travel	Travel A77 N/B to start of Spittalhill off slip
Section B	10	Treat	Spittalhill N/B off slip
	11	Travel	Turn and travel to start of Spittalhill S/B on slip
	12	Treat	Spittalhill S/B on slip
Section C	13	Travel	Travel A77 S/B to Dutchhouse and turn and travel to start of A77 N/B off slip at Bellfield
	14	Treat	Bellfield N/B off slip, Bellfield Roundabout and N/B on slip
	15	Travel	Travel A77 N/B to start of Grass yards off slip
	16	Treat	Grassyards N/B off slip and N/B on slip
	17	Travel	Travel A77 to Meiklewood and turn and travel A77 S/B to start of Grassyards S/B off slip
	18	Treat	Grassyards S/B off slip and S/B on slip

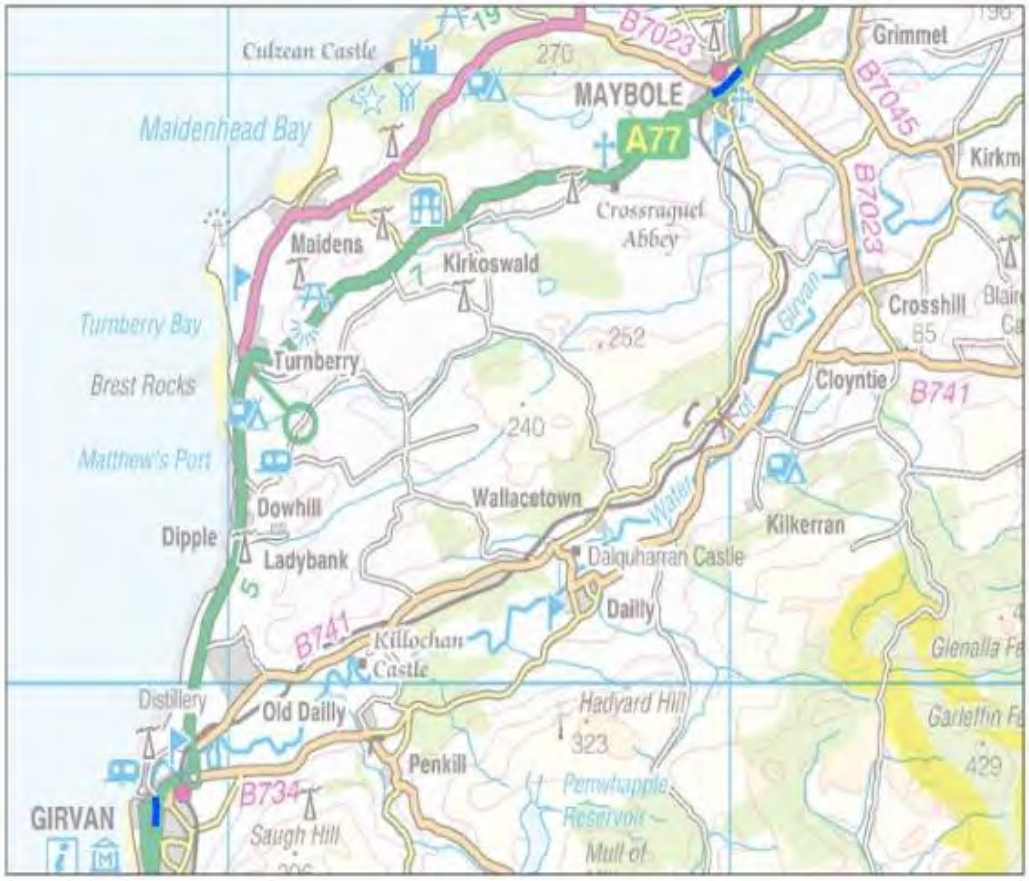
Section B	19	Travel	Travel A77 S/B to start of Bellfield off slip
	20	Treat	Bellfield S/B off slip and then A76 S/B to Crossroads roundabout, circulate Bowhouse roundabout
	21	Travel	Travel A76 south to Bargower and turn and travel A76 north to start of splitter island at Crossroads roundabout
	22	Treat	Splitter island at south of roundabout and splitter at north of roundabout
	23	Travel	Travel A76 north to splitter island at south of Bowhouse roundabout
	24	Treat	Splitter island at south of roundabout and splitter at north of roundabout
	25	Travel	Travel A76 N/B to Bellfield roundabout
Section D	26	Treat	Bellfield S/B on slip
	27	Travel	Travel A77 S/B to Dutchhouse roundabout
	28	Treat	A78 south from Dutchhouse to Monktonhead roundabout
	29	Treat	A78 south from Monktonhead to Meadowhead roundabout
	30	Treat	A78 north from Meadowhead to Monktonhead roundabout
	31	Treat	Circulate Monktonhead roundabout and Treat A78 south to Dutchhouse roundabout
	32	Travel	Travel A77 S/B to start of splitter lanes at Whitletts Rbt
	33	Treat	Splitter lanes 3 and 4 at Whitletts Rbt
	34	Travel	End of route and return to depot

Route A4

Section ID	Stage	Status	Description
Section A	1	Travel	Travel to start of route on A78 at Loans N/B off slip
	2	Treat	Loans N/B off slip
	3	Travel	Travel to A78 Loans N/B on slip
	4	Treat	Loans N/B on slip
	5	Travel	Travel to A78 Hillhouse N/B off slip
	6	Treat	Hillhouse N/B off slip
	7	Travel	Travel Old Ayr Rd to Meadowhead roundabout
	8	Treat	A78 N/B from Meadowhead roundabout to Warrix Interchange
	9	Treat	A78 N/B to Eglinton Interchange
	10	Treat	A78 N/B to Pennyburn roundabout
Section B	11	Treat	Pennyburn roundabout and A78 N/B to Sharphill roundabout
	12	Treat	Sharphill roundabout and A78 N/B to Chapelhill roundabout
	13	Treat	Chapelhill roundabout
	14	Treat	A78 N/B to end of splitter island
	15	Treat	A78 N/B to Montfode roundabout
Section C	16	Treat	A78 N/B to Seamill Hydro
	17	Treat	A78 N/B to Yerton Brae
	18	Treat	A78 N/B to Hunterston Power Station roundabout
	19	Treat	Hunterston roundabout
	20	Treat	A78 S/B to end of splitter island
	21	Travel	Travel A78 S/B to start of splitter island at Montfode
Section B	22	Treat	Splitter island
	23	Travel	Travel to splitter island at south of Montfode roundabout

Section ID	Stage	Status	Description
	24	Treat	Splitter Island
	25	Travel	Travel A78 S/B to start of splitter island at Chapelhill roundabout
	26	Treat	Splitter island
	27	Travel	Travel to A78 S/B
	28	Treat	A78 S/B from Chapelhill roundabout to Sharphill roundabout
	29	Treat	A78 S/B from Sharphill to Pennyburn roundabouts
Section A	30	Treat	A78 S/B from Pennyburn to Eglinton Interchange
	31	Treat	A78 S/B from Eglinton to Warrix Interchange
	32	Treat	A78 from Warrix to Meadowhead roundabouts
	33	Travel	Travel A78 N/B to Newhouse n/b off slip
	34	Treat	Treat off slip
	35	Travel	Travel to Newhouse n/b on slip
	36	Treat	Treat on slip
	37	Travel	Travel A78 N/B to Warrix n/b off slip
	38	Treat	Treat off slip
	39	Travel	Travel to Warrix n/b on slip
	40	Treat	Treat on slip
	41	Travel	Travel A78 N/B to Eglinton n/b off slip
	42	Treat	Treat off slip
	43	Travel	Travel to Eglinton n/b on slip
	44	Treat	Treat on slip
	45	Travel	Travel A78 to Eglinton S/B off slip
	46	Treat	Treat off slip
	47	Travel	Travel to Eglinton S/B on slip
	48	Treat	Treat on slip
	49	Travel	Travel A78 to Warrix S/B off slip
	50	Treat	Treat off slip
	51	Travel	Travel to Warrix S/B on slip
	52	Treat	Treat on slip
	53	Travel	Travel A78 to Newhouse S/B off slip
	54	Treat	Treat off slip
	55	Travel	Travel to Newhouse S/B on slip
	56	Treat	Treat on slip
	57	Travel	Travel A78 to Hillhouse S/B off slip via Old Ayr Rd
	58	Treat	Treat on slip
	59	Travel	Travel to Loans S/B off slip
	60	Treat	Treat off slip
	61	Travel	Travel to Loans S/B on slip
	62	Treat	Treat on slip
	63	Travel	End of route, return to depot

Route A5

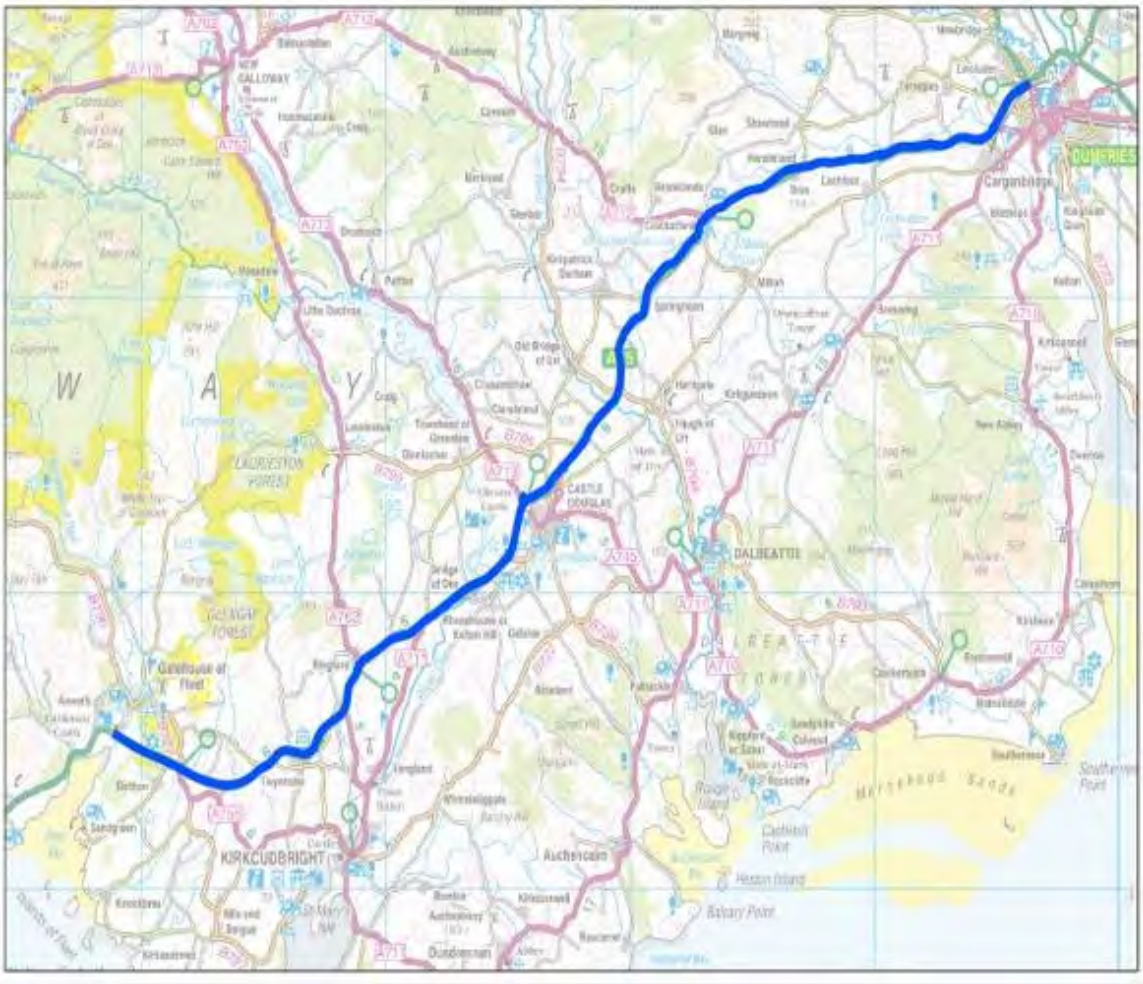


Section ID	Stage	Status	Description
Section A	1	Travel	Proceed to Maybole at junction of St Cuthberts Rd.
	2	Treat	High St from St Cuthberts Rd to Carrick St
	3	Travel	Cross carriageway to other side.
	4	Treat	High St from Carrick St to St Cuthberts Rd
	5	Travel	Proceed to Girvan to Junction of Dalrymple St and Knockcushion St.
	6	Treat	Dalrymple St from traffic lights to Duncan St.
	7	Travel	Cross carriageway to other side.
	8	Treat	Dalrymple St from Duncan St to Traffic Lights.
	9	Travel	End of route, return to depot

Route A6

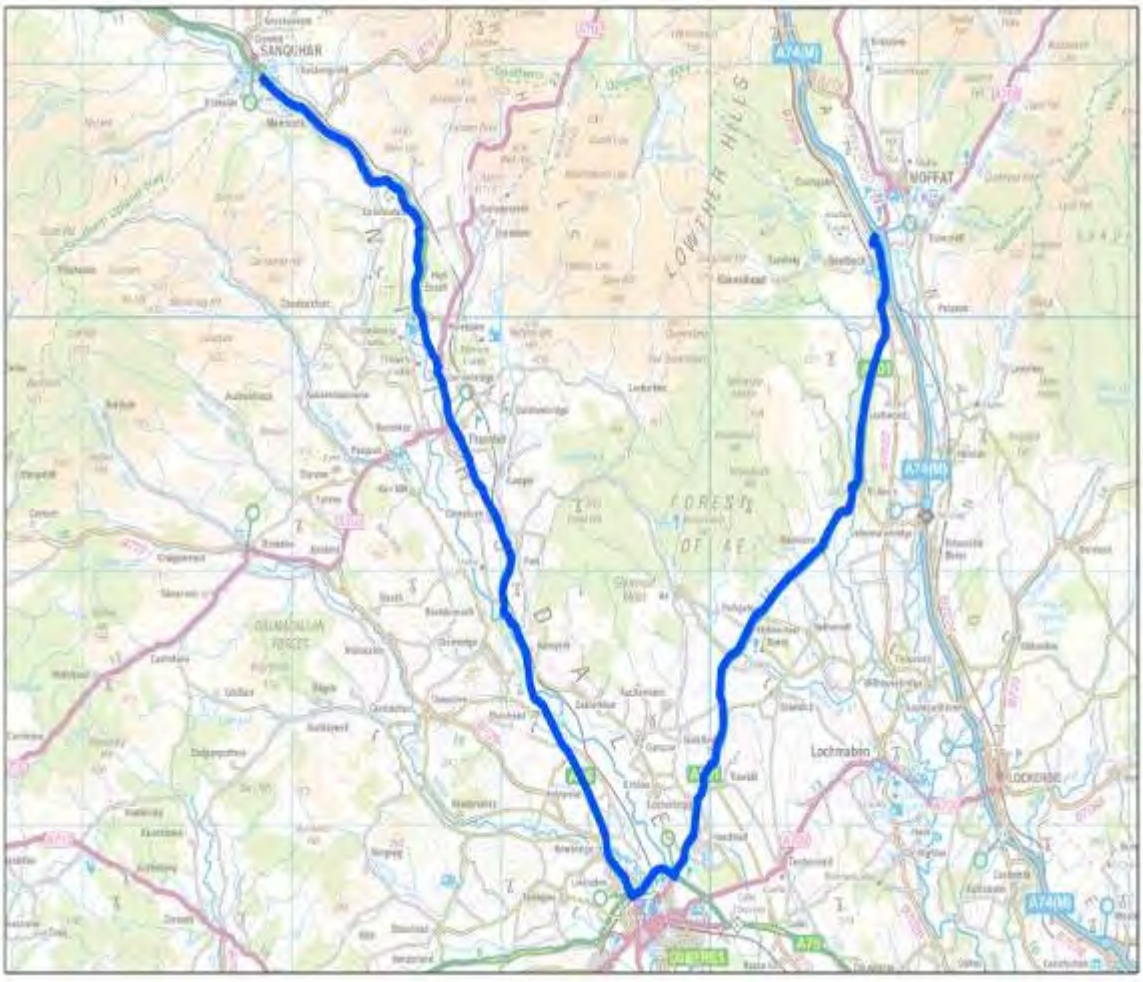
Section ID	Stage	Status	Description
Section A	1	Travel	Proceed to Main St Largs
	2	Treat	Spray from roundabout at Aitken St to junction of Fort St
	3	Travel	Cross carriageway to other side.
	4	Treat	Spray from traffic lights to junction of Aitken St
	5	Travel	End of route, return to depot

Route CD1



Section ID	Stage	Status	Description
Section A	1	Travel	Depot to turning point South of Newton Farm Campsite
	2	Treat	From Southern entrance to turning point to start of 3 lanes.
Section B	3	Treat	Start of 3 lanes to end
	4	Treat	End of 3 lanes to Twynholm
	5	Treat	3 lanes at Twynholm to end of 3 lanes
	6	Treat	Twynholm to Hightae
	7	Treat	Hightae to Allanton
	8	Treat	Allanton to Ramhill Bridge
	9	Treat	Ramhill Bridge to 3 lanes at Beattyknowes
	10	Treat	Start of 3 lanes to end
Section C	11	Treat	From End of 3 lanes to start of Glen Dual at Drummore roundabout
	12	Treat	Eastbound Dual to start of 3 lanes
	13	Treat	3 lanes section on the Glen
	14	Treat	End of 3 lanes at Garroch roundabout to Glasgow Rd roundabout
	15	Travel	Glasgow Rd Rbt to start of Westbound dual travel
	16	Treat	Start of Westbound dual to end
	17	Travel	End of route return to depot

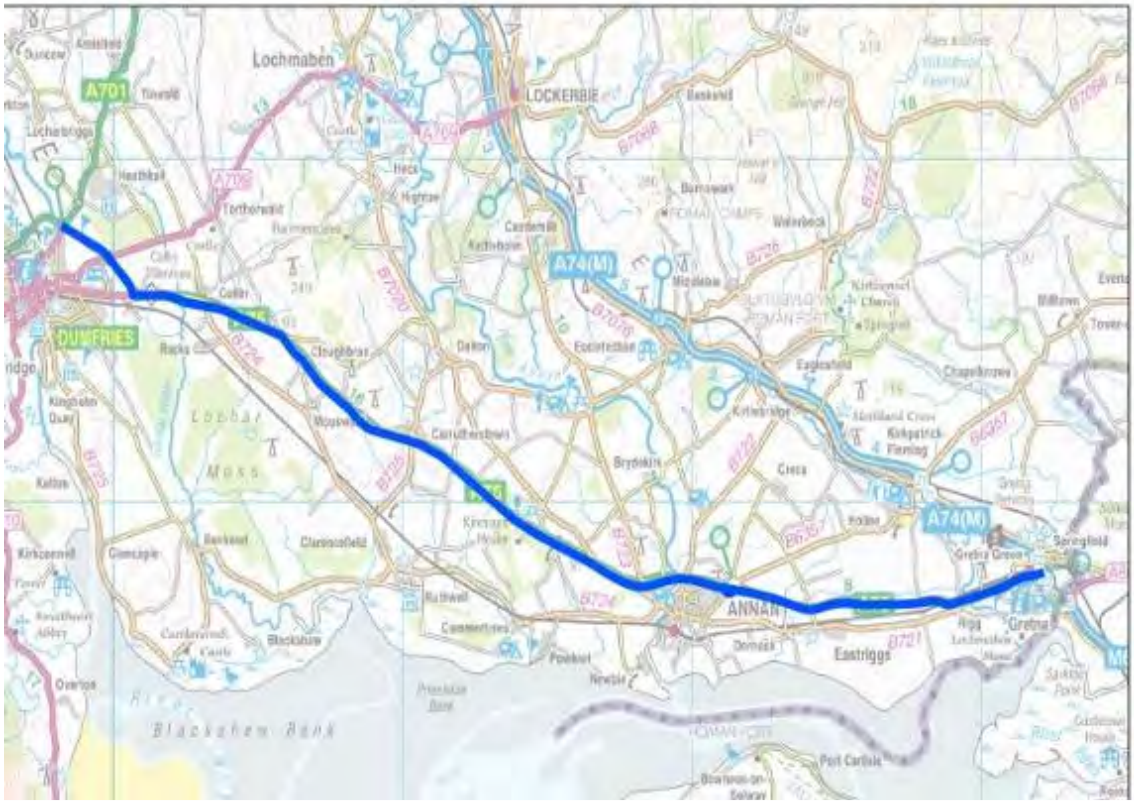
Route W1



Section ID	Stage	Status	Description
Section A	1	Travel	Depot to Beattock East Roundabout
	2	Treat	Beattock East Roundabout – Beattock South Jct
	3	Treat	Beattock South Jct – St Ann's Bridge
	4	Treat	St Ann's Bridge – South Mollinburn Bridge
	5	Treat	South Mollinburn Bridge - Burrance
	6	Treat	Burrance – Ae Bridge
	7	Treat	Ae Bridge – Parkgate junction
Section B	8	Treat	Parkgate junction – Johnfield (McEwan's Bus Depot)
	9	Treat	Johnfield – Amisfield
	10	Treat	Amisfield – Tinwald Downs
	11	Travel	Turn at roundabout and head A701 n/b
	12	Treat	Treat Tinwald to Amisfield 3rd lane
	13	Travel	Turn and travel A701 to Tinwald downs
	14	Treat	Tinwald Downs R/A – A75 Edinburgh Rd R/A
Section C	15	Treat	A75 Glasgow Rd R/A – A76 Lochside R/A (n/b)
	16	Treat	A76 Lochside R/A – A75 Glasgow Rd R/A (S/B)
	17	Treat	A75 Glasgow Rd R/A – A76 Irongray Jct (South)
	18	Treat	A76 Irongray Jct (South) – A76 Newbridge Jct
	19	Treat	A76 Newbridge Jct – A76 Glengowar
	20	Treat	A76 Glengowar – A76 Irongray Jct 9 (North)
	21	Treat	A76 Irongray Jct (North) – A76 Auldgirth

Section D	22	Treat	A76 Auldgirth – A76 Barburgh Mill
	23	Treat	A76 Barburgh Mill – A76 Closeburn (South) 40mph
	24	Treat	A76 Closeburn – A76 Thornhill (South) 30mph
	25	Treat	A76 Thornhill (South) 30mph – A76 Thornhill (North) 30mph
	26	Treat	A76 Thornhill (North) 30mph – A702 junction CarronBridge
Section E	27	Treat	
	28	Treat	
	29	Treat	
	30	Treat	
	31	Travel	End of route – Return to depot

Route W2



Section ID	Stage	Status	Description
Section A	1	Travel	Depot to A75 Glasgow Rd R/A
	2	Treat	A75 Glasgow Rd R/A to start of Collin By-pass
Section B	3	Treat	Collin Eastbound to end of Eastbound
	4	Treat	End of East dual to Carrutherstown
Section C	5	Treat	Carrutherstown 3 lane Hargrove improvement section to Start of Kinmount
	6	Treat	Start of Kinmount to end of Kinmount
	7	Treat	End of Kinmount to Gretna Eastbound dual
	8	Treat	Gretna Eastbound dual to Glasgow Rd off
	9	Travel	Glasgow off to Glasgow Rd on slip
	10	Treat	Gretna Westbound dual
	11	Travel	From end of dual carriageway to Annan junction
	12	Treat	Annan East Quadrant link road on and off slip
Section B	13	Travel	A75 westbound to Collin By-pass
	14	Treat	Collin Westbound dual
	15	Travel	End of route return to depot

Route S1

Section ID	Stage	Status	Description
Section A	1	Travel	Depot to A751 at Innermessan A77 Junction
	2	Treat	A751 at Innermessan A77 Junction to A75 Junction
	3	Treat	A75 from A751 Jct to Stair Drive
	4	Treat	A77 from Stair drive north to new roundabout at ferry terminal at north of Cairnryan
Section B	5	Treat	From new roundabout at ferry terminal at north of Cairnryan to start of 3 lanes at Pinnies
	6	Treat	Start of 3 lanes to end of 3 lanes
	7	Treat	End of three lane to wide section
	8	Treat	New wide section to Watertanks
	9	Treat	Watertanks to Ballantrae village
Section C	10	Treat	Ballantrae village to Bennane hill improvement scheme
	11	Treat	Bennane improvement to start of 3 lane section
	12	Treat	Start of 3 lanes to end of 3 lanes at Bennane
	13	Treat	End of three lane to Shallochpark Rbt
	14	Travel	End of route return to depot

Route S/2

Section ID	Stage	Status	Description
Section A	1	Travel	Depot to A75 Junction with the A751
	2	Treat	A75 from A751 Jct to 3 lanes at start of Dunragit west section
Section B	3	Treat	Start of 3 lane section to end of lane section
	4	Treat	Plantingend 3 lanes to River Luce Bridge
	5	Treat	River Luce Bridge to A747 (Quarry Jct)
	6	Treat	A747 (Quarry Jct) to Start of Eastbound Dual at Barlae
	7	Treat	Start of Eastbound dual to End of Eastbound dual
	8	Treat	End of dual to Kirkcowan Jct
	9	Travel	Kirkcowan Jct to Start of Westbound dual
	10	Treat	Westbound Dual to End of Dual
	11	Travel	End of Westbound dual to Eastbound off slip
	12	Treat	Eastbound off slip to Eastbound on slip
	13	Travel	Eastbound on slip to Kirkcowan
	14	Treat	Kirkcowan to Shennanton Jct
	15	Treat	Shennanton Jct to The House on the Stilts
	16	Treat	The House on the Stilts to Benfield
	17	Treat	Benfield to Newton Stewart 3 lane section
	18	Treat	Newton Stewart, 3 lane section to Roundabout
Section C	19	Treat	Newton Stewart Roundaboutt to Blackcraig
	20	Treat	Blackcraig to Palnure
	21	Treat	Palnure to Creetown West Jct
	22	Treat	Creetown West to Carsluith East Cott
	23	Treat	Carsluith East Cott to turning point South of Newton Farm Campsite
	24	Travel	End of route return to depot

Appendix 3

Actual Salt Stock Levels

ANNEX 7.2/I

APPENDIX WSP 3

Table 7.2.J.6 Salt Levels

Year	Minimum Salt levels
2019/2020	19,000

Actual Salt Stock Levels to be provided

De-icing Material (i.e. Dry salt/ABP)	Location	Type (Barn/Open)	Min 1st Oct
Dry salt	Polmadie	Sheeted	10,000 T
Potassium Acetate	Polmadie	Tank	29,000 lit
Magnesium Chloride	Polmadie	Tank	39,000 lit
Dry salt	Ayr	Covered structure	3,400 T
Dry salt	Stranraer	Covered structure	800 T
Dry salt	Wayside (Dumfries)	Covered structure	800 T
Dry salt	Castle Douglas	Covered structure	700 T
Dry Salt	Maidenhill	Covered Structure	600 T
Dry salt	Larkhall	Covered structure	2,7000 T

Table 7.2.J.7 Brine production and Storage levels

Location	Type (Saturator/Storage only)	Capacity (L)	Min (L)
Polmadie	Saturator and storage	110,000	20,000
Ayr	Saturator and storage	40,900	8,000
Stranraer	Saturator and storage	24,000	8,000
Dumfries	Saturator and storage	36,000	8,000

Appendix 4

Winter Constructional Plant

Appendix WSP 4

Table 7.2/J/8
Front Line Winter Service Plant for Carriageways

Type of Winter Constructional Plant	Depot Location	Vehicle Capacity	Number of Vehicles	Plant Use
Fixed Spreader	Polmadie	$9m^3$ plus	4	(i) Precautionary Treatments (ii) Snow Clearance up to 100mm (iv) Compliance with para 3.3.6 (Sch7 Part 2)
Fixed Spreader	Polmadie	$12m^3$	6	
Fixed Spreader	Polmadie	$9m^3$	3	
Fixed Spreader	Ayr	$12m^3$	4	
Fixed Spreader	Ayr	$9m^3$ plus	1	
Fixed Spreader	Ayr	$9m^3$	1	
Fixed Spreader	Ayr	$6m^3$	1	
Fixed Spreader	Stranraer	$12m^3$	2	
Fixed Spreader	Castle Douglas	$12m^3$	1	
Fixed Spreader	Wayside (Dumfries)	$9m^3$	1	
Fixed Spreader	Wayside (Dumfries)	$12m^3$	2	
Fixed Spreader	Castle Douglas	$9m^3$	1	
Combined Fixed Spreader and Potassium Acetate sprayer	Polmadie	$9m^3$ and 3800 litres	1	
Fixed Spreader	Ayr	$6m^3$	2	(iii) Winter Service Patrols (ii) Snow Clearance up to 100mm
Fixed spreader	Ayr	$9m^3$	1	
Fixed Spreader	Polmadie	$6m^3$	4	

Table 7.2/J/9
Front Line Plant for Treatment of Footways, Footbridges and Cycle Facilities

Type of Winter Service Plant	Depot Location	Vehicle Capacity	Number of Vehicles	Plant Use
Transit Pick-up and 3 man team	Polmadie	2 Tonne	2	(ii) Snow Clearance for cat A response (iii) Snow clearance for Cat B, Cat C and Cat D Response
Mini Tractor with Mechanical Spreader and Snowplough	Polmadie		1	
Pedestrian snow blower	Polmadie		1	
Transit Pick-up and 3 man team	Polmadie	2 Tonne	2	(iii) Snow clearance for Cat B, Cat C and Cat D Response
7.5T Tipper plus Turbo cast	Ayr	3.5T	1	(ii) Snow Clearance for cat A response (iii) Snow clearance for Cat B, Cat C and Cat D Response
Transit Pick-up and 3 man team	Ayr	2 Tonne	1	
Cruiser turbocast manual/mechanical salt applicator	Castle Douglas	50kg	1	(ii) Snow Clearance for cat A response (iii) Snow clearance for Cat B, Cat C and Cat D Response
HI-LUX and trailer and 3 man team	Dumfries	1 Tonne	1	
L200 Pick-up and trailer and 3 man team	Dumfries	1 Tonne	2	(ii) Snow Clearance for cat A response (iii) Snow clearance for Cat B, Cat C and Cat D Response
18ton Tipper and 3 man team	Dumfries	1 Tonne	1	ii) Snow Clearance for cat A response (iii) Snow clearance for Cat B, Cat C and Cat D Response

Table 7.2/J/10
Reserve Winter Constructional Plant

Type of Winter Service Plant	Depot Location	Vehicle Capacity	Number of Vehicles	Plant Use
Fixed Spreader	Polmadie	9m3	4	(i) Precautionary Treatments (ii) Snow Clearance up to 100mm (iv) Compliance with para 3.3.6 (Sch7 Part 2)
Combined fixed spreader and Potassium Acetate sprayer	Polmadie	$9m^3$ and 3800 litres	1	

Table 7.2/J/11
Additional winter constructional plant

Type of Winter Service Plant	Depot Location and Operator	Number of Vehicles	Mobilisation Time
TM Truck with plough attachment	Polmadie	4	1 hour
Snowblower	Ayr	1	2 hours
Demount spreader and plough	Polmadie and Ayr	2	2 hours
Fixed Spreader	James G Findlay (Dumfries)	1	4 hours between 07.00 hrs and 18.00 hrs and 8 hours outwith this time
Pedestrian footway snow blower	Scotland TranServ Polmadie	1	2 hours
RAIKO Ice Breaker	Amey (Burghmuir)	1	Available to STS on agreement with TS depending on needs of all units
Tipper	W Hamilton (Larkhall)	5	These vehicle are available to STS
Tractor + Plough	J Finlay, Kirkcudbright	1	This will be available to STS
Tipper	Bardon Aggregate	3	These vehicles are available if required,
JCB 3CX	J Jamieson, Maybole	10	
Tractor + plough	J Jamieson, Maybole	2	

Type of Winter Service Plant	Depot Location and Operator	Number of Vehicles	Mobilisation Time
Excavators	Duncan Plant, New Cumnock	2	
Fast Track + Plough	R Duncan, New Cumnock	2	
Excavator	Solway Plant	6	These vehicles are available if required,
Tractor + plough	Solway Plant	2	
Tractor + plough	James G Findlay	2	
Tractor + plough	Luce Bay	1	
Excavator	Luce Bay	10	
Excavator	Oakbank Services	2	

Table 7.2/J/12
Loading winter service plant available for loading front line, reserve and additional winter service plant

Type of Winter Service Plant	Depot Location	Vehicle Capacity	Number of Vehicles
JCB Load all	Polmadie	2 Ton	1
JCB Load all	Ayr	2 Ton	1
JCB Load all	Dumfries	2 Ton	1
JCB Load all	Lockerbie	2 Ton	1
JCB Load all	Castle Douglas	2 Ton	1
JCB Load all	Stranraer	2 Ton	1

Appendix 5

Compounds Depots and Facilities

Depot or Facility Name	Owner	Postal Address	Purpose	Access Arrangements	Contact Details	Facilities
Polmadie	Transport Scotland	Oatlands, 150 Polmadie Road : Glasgow : G5 OHD	Primary Depot	Direct access onto M74		Refer to Annex 5.7/A Figure 3.1.1/B. Facilities include offices, mess facilities, material storage, sheeted salt cover, brine tanks, garage and vehicle parking.
Highfield Business Park, Ayr	Fleetstone	Highfield Business Park, St Quivox, Ayr, KA6 5HQ	Primary Depot	Direct access to A77		Refer to Annex 5.7/A Figure 3.1.1/D. Facilities include offices, mess facilities, material storage, salt covered structure, brine tanks, garage and vehicle parking.
Wayside (Dumfries)	DG First	Annan Road, Dumfries : DG1 3JX	Primary Depot	Access from A780 to A75		Refer to Annex 5.7/A Figure 3.1.1/H. Facilities include offices, mess facilities, material storage, salt covered structure, brine tanks, garage and vehicle parking.
Castle Douglas	DG First	Stewartry, Abercromby Road, Castle Douglas, DG7 1LH	Primary Depot	Access from A713 to A75		Refer to Annex 5.7/A Figure 3.1.1/J. Facilities include offices, mess facilities, material storage, salt covered structure, garage and vehicle parking.
Newton Stewart	DG First	Barnkirk Depot, Newton Stewart, DG8 6QD.	Reserve Depot	Access from A714 to A75		Refer to Annex 5.7/A Figure 3.1.1/L. Facilities include offices, mess facilities, material storage, salt covered structure, garage and vehicle parking.
Stranraer	DG First	Commerce Road, Stranraer. DG7 9DD	Primary Depot	Access from A77 to A77 and A75.		Refer to Annex 5.7/A Figure 3.1.1/N. Facilities include offices, mess facilities, material storage, salt covered structure, brine tanks, garage and vehicle parking.
Maidenhill	Balfour Beatty		Reserve Depot	Direct access to M77		Refer to Annex 5.7/A Figure 4.1.1/B. Facilities include offices, mess facilities, material storage, salt covered structure, brine tanks, garage and vehicle parking.
Cumbernauld	Balfour Beatty		Reserve Depot	Access from M80		Refer to Annex 5.7/A Figure 4.1.1/D. Facilities include offices, mess facilities, material storage, garage and vehicle parking.
Dalston	Balfour Beatty		Reserve Depot			Refer to Annex 5.7/A Figure 4.1.1/F. Facilities include offices, mess facilities, material storage, salt covered structure, garage and vehicle parking.

Appendix 6

Labour Resources

Depot	Name	Loader	Spreader
Ayr		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
		Yes	Yes
Dumfries			Yes
		Yes	Yes
			Yes
		Yes	Yes
			Yes
			Ongoing
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
			Yes
		Yes	yes
		Yes	yes
		Yes	Ongoing
			Ongoing
		Yes	
		Yes	
		Yes	
		Yes	Ongoing

Depot	Name	Loader	Spreader	Acetate
Polmadie		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	Yes
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	Yes
		Yes	Yes	
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	Yes
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
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		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	
		Yes	Yes	

		Yes	Yes	
		Yes	Yes	Yes
		Yes	Yes	
		Yes	Yes	

Appendix 7

Standard Record and Proposed Action Form 1

Communications Log Form 2

Trunk Road Blockages Form 3

Accidents Resulting from Weather Conditions Form 4

Complaints Record Sheet Form 5

Response Times Achieved Form 6

Constructional Plant & Equipment Downtime and Hardware/Software Downtime and Faults Form 7

Operator Record Log Form 8

Salting Route Dry Run Record Sheet Form 9

Scotland TranServ Winter Form 1: Daily Winter Action Plan

Date: **/**/** | **Period From:** Noon **/**/** **to** Noon **/**/**

Depot	Route No. (greyed routes not patrolled)	Description	Res. Salt H/M/L	Min. RST (°C)	Forecast Hazard				Matrix Cat.		Action 1		Action 2	
					Type (1)	Time (1)	Type (2)	Time (2)	(1)	(2)	Type	Time	Type	Time
Polmadie	P1A	A725 and A726 Whistleberry R/A to West Mains												
	P1B	M74 Jct 6 and 7 slips												
	P2	M74 Jct 3a – M8 Jct 23												
	P3	M8 Jct 13 – 26												
	P4A	M74 Jct 7 – 8												
	P4B	M74 Jct 8 – 10												
	P5A	M74 Jct 6 – 8												
	P5B	M74 Jct 10 - 12												
	P6	M8 Jct 10 - 17 & M80												
	P7A	M8 White Cart - Jct 30 (Includes Jct 29a slip roads)												
	P7B	M8 off slip to M898 - A82 Barloan R/A												
	P7C	A82 Barloan R/A - Stoneymollan												
	P8A	M8 Jct 21 - A737 Kilbarchan												
	P8B	A737 Kilbarchan – Dalry (Includes Dalry By Pass)												
	P8C	A737 Dalry - A738 Pennyburn												
	P9A	M8 Jct 30 - A8 Cartsdyke R/A												
	P9B	M898 & A82 slips, Dunglass & Dalnotter												
	P10A	A737 slips and M8 Jct 24 - 29												
	P11A	A78 Cartsdyke R/A - A78 Dunlop St R/A, Greenock												
	P11B	A78 Dunlop St R/A - Bankfoot R/A												
	P11C	A78 Bankfoot R/A to Hunterston Terminal R/A												
	P12A	M8 Jct 22 - M77 Jct 3												
	P12B	M77 Jct 3 - M77 Jct 5												
	P13	East Kilbride Footways and footbridges												
	P14A	St James I'change, White Cart Viaduct & Kingston Br												
	P14B	Erskine Bridge area												
Ayr	A1A	A76, A719 Crossroads - B744 Crosshands												
	A1B	A76, B744 Crosshands - Mauchline												
	A1C	A76 Mauchline to B741 Jct New Cumnock												
	A1D	A76, B741 New Cumnock to Carronbridge												

Scotland TranServ Winter Form 1: Daily Winter Action Plan

Date: **/**/** | Period From: Noon **/**/** to Noon **/**/**

Depot	Route No. (greyed routes not patrolled)	Description	Res. Salt H/M/L	Min. RST (°C)	Forecast Hazard				Matrix Cat.		Action 1		Action 2	
					Type (1)	Time (1)	Type (2)	Time (2)	(1)	(2)	Type	Time	Type	Time
	A2A	A77 Dutchhouse R/A - Maybole												
	A2B	A77 Maybole to Turnberry - A719 Jct												
	A2C	A77 Turnberry - A714 Shallochpark R/A												
	A3A	A77 Dutchhouse - Spittallhill												
	A3B	A77 Spittallhill – Bellfield, A76 Bellfield – Crosshands												
	A3C	A77 Bellfield Interchange - Meiklewood Interchange												
	A3D	A78 Dutchhouse – Meadowhead, A77 splitters												
	A4A	A78 Loans - Pennyburn R/A												
	A4B	A78 Pennyburn R/A - Montfode R/A												
	A4C	A78 Montfode R/A - Hunterston Terminal R/A												
	A5	A77 Girvan, Maybole Footways and Hansel Br												
	A6	A78 Largs footways												
Wayside	W1A	A701 Beattock R/A - A701 Parkgate Jct												
	W1B	A701 Parkgate Jct - A75 at A76 Glasgow Rd R/A												
	W1C	A76 at A75 Glasgow Rd R/A - Auldgirth												
	W1D	A76 Auldgirth - A702 Carronbridge Jct												
	W2A	A75, A701 Glasgow Rd R/A - start of Collin Bypass												
	W2B	A75 Collin Bypass - Carrutherston												
	W2C	A75 Carrutherston - Gretna												
C D	C1A	A75 S of Newton Farm Campsite - start of 3 lane s												
	C1B	A75 3 lane section - Beattyknowes												
	C1C	A75 Bettyknowes - Glasgow Rd R/A												
Stranraer	S1A	A751, A75 to Stranraer, A77 to Cairnryan ferry port												
	S1B	A77 Cairnryan ferry port - Ballantrae												
	S1C	A77 Ballantrae - A714 Shallochpark Roundabout												
	S2A	A75, A751 Jct – Plantingend, east of Castle Kennedy												
	S2B	A75 Castle Kennedy - A714 Newton Stewart R/A												
	S2C	A75 Newton Stewart – S of Newton Farm Campsite												

Scotland TranServ Winter Form 1: Daily Winter Action Plan

Date: **/**/** | **Period From:** Noon **/**/** **to** Noon **/**/**

Depot	Route No. (greyed routes not patrolled)	Description	Res. Salt H/M/L	Min. RST (°C)	Forecast Hazard				Matrix Cat.		Action 1		Action 2	
					Type (1)	Time (1)	Type (2)	Time (2)	(1)	(2)	Type	Time	Type	Time
Polmadie	Patrol P1A	M8 Jct 10 - M77 Jct 5, M8 Kingston Br - Jct 13, M80 to Jct 3, M8 to Jct 10												
	Patrol P2A	A725 Whistleberry Toll – Whirlies, A726 to McDonalds R/A, M74 S/b to Jct 12												
	Patrol P3A	M74 Jct 3 -M8, A8 Langbank, M898, A898 Erskine Br												
	Patrol P1B	A737 to Kilwinning, A76 to New Cumnock												
Ayr	Patrol A1B	A76 Cumnock – Dumfries, A75 Dumfries - M6												
	Patrol A2B	A77 Girvan – Stranraer, A75 to Gatehouse of Fleet												
	Patrol A3A	A77 Whitletts – Meiklewood, A78 Dutchhouse – Pennyburn												

STS Duty Supervisor		Notified at			
DG Duty Supervisor		Notified at			
Duty Manager		Confirmed by			
Pre-deployment at ARSA sites, weather warnings in place or other additional instructions		**Notes:**			

Form 2 Communications Log

From Noon		Winter Service Duty Officer:
Until Noon		

Date	Time	From	To	Means : (telephone/ mobile/radio)	Message/Instruction

Form 3 Trunk Road Blockages						
Date	**Winter Service Duty Officer**	**Location**	**Length of Blockage**	**Time of Blockage**	**Time of re-opening**	**Comments**

Form 4 Accidents Resulting From Weather Conditions

Date of Report:		Report Written by:	

Details of Accident

Date:		Time:	
Road No.:		Road Name:	
Town:		County:	
Details of accident:			
Details of damage:			

Details of Person(s) Involved:

Driver:		Address:	
Telephone No. (home)		Telephone No. (Mobile):	
Details Received by:		Telecom / Personal visit / On network / Letter / Other (delete as necessary)	

Details of Actions Taken:

Actions Taken (if necessary):	

Details Recorded by:

Form 5 Complaints Record Sheet (Members of the Public and Trunk Road users)

Message / Defect Record

Number:	

Date:		**Time:**	
Message for:		**Message from:**	
Taken by:		**Company:**	
☐ **Telephoned**	☐ **Please phone**	**Telephone:**	
☐ **Called in**	☐ **Returned call**	**Fax:**	
☐ **Will call back**	☐ **URGENT**		

Message:	
Road No.	**Location:**
Defect Description:	
Action:	

Name:		**Signature:**	
Date Completed:			

Form 6 Response Times Achieved

Date: **Period:**

	PI No 11 Requires response within 1 hour			PI No 11 Requires treatment completed within 2 hours							
Salting Route	**Time Called Out**	**Time treatment started**	**Response Time**	**Time Treatment Started**	**Time Treatment Complete**	**Treatment Time**	**Total Tonnage used**	**Salt tonnage used (70%)**	**Brine amount used (30%)**	**Pot Acetate used (lit)**	**Comments**
P1											
P2											
P3											
P4											
P5											
P6											
P7											
P8											
P9											
P10											
P11											
P12											
P13											
P14											
Pol A-1											
Pol A-2											
Pol A-3											
Pol B-1											
A1											
A2											
A3											
A4											
A5											
A6											
Ayr B-1											
Ayr B-2											
Ayr A-3											
W1											
W2											
C1											
S1											
S2											

Form 7 Winter Servcie Plant Mechanical Downtime and Hardware / Software Downtime and Faults			
Date:		Period:	

Location	Fault	Downtime	Comments
Name:			
Date:			

Form 8 Operator Record Log

Month		Date								Action	
October		1		9		17		25		**Patrol**	Y / N
November		2		10		18		26		**Treatment spread rate**	10 / 20 / 30 / 40
December		3		11		19		27		**Pre-wetted**	Y / N
January		4		12		20		28		**Call out**	Y / N
February		5		13		21		29			
March		6		14		22		30			
April		7		15		23		31			
May		8		16		24					

Depot:		Route Number:	
Vehicle Registration:		Drivers Name:	
Plough Fitted	Yes	No	**Plough to be fitted and remain fitted from 01st October to 15th May**

Time Treatment Commenced:		Time in Depot:		Time Out of Depot:	
		Time Treatment Complete:		Time Back in Depot:	
Time of Call Out: **Only to be completed if called to treat immediately**		Did Treatment commence within 1 hour of Call out Time:	Y / N **If no, detail reason why below:**		
Comment why 1hr not achieved: e.g. Heavy traffic, Road closure etc					

Treatment Delays

Time Treatment Stopped		Time Treatment Re-commenced		Time Treatment Stopped		Time Treatment Re-commenced	
Location:				Location:			
Reason for Stopping, e.g. Rain, Breakdown, etc				Reason for Stopping, e.g. Rain, Breakdown, etc			

Route Comments: Wet, Icy, blocked drains, equipment downtime etc	**Total Tonnage Out**	**Total Tonnage In**	**Total Tonnage Used**

AREAS REQUIRING SPECIAL ATTENTION
WATER RUN OFF AREAS
FROST SUSCEPTIBLE AREAS
GRADIENT LOCATIONS

Route treatment completed within 2 hours from start of treatment to end of treatment	Y / N **If no, detail reason why below or ensure treatment delays section is completed**

Reason why 2 hour treatment time wasn't achieved if treatment delay section isn't applicable:

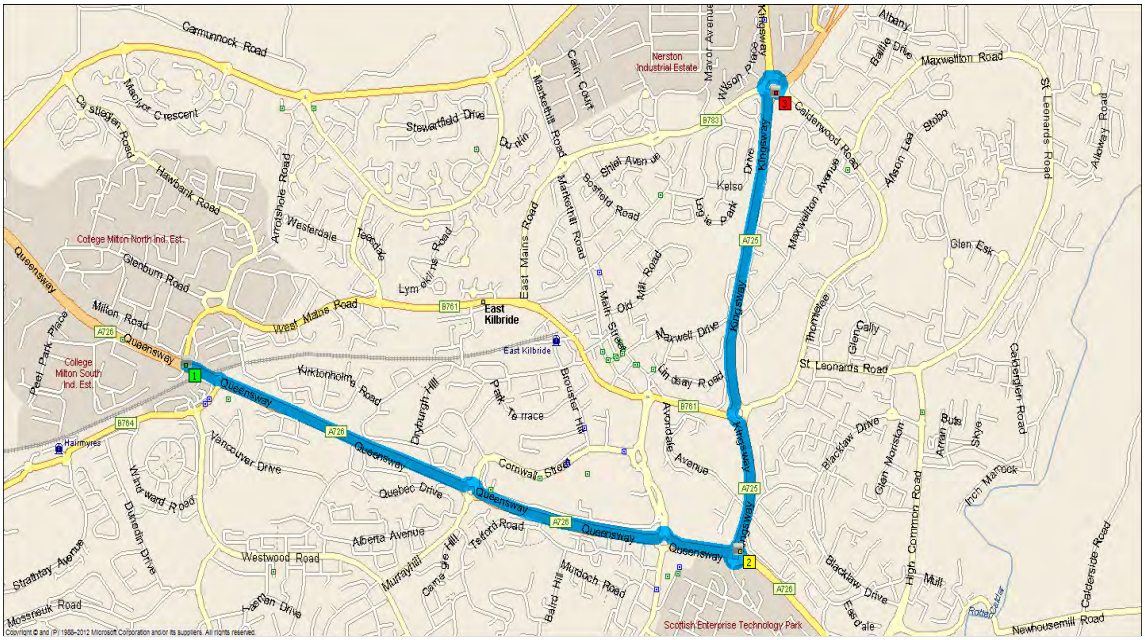
Signed Operator:		Date:	
		Time:	
Signed Supervisor		Date:	
		Time:	

Form 9 Dry Run Record Sheet			
Date:		Depot:	
Treatter Type:		Treatter Reg.:	
Driver: (Print Name)		Supervisor: (Print Name)	
Vehicle / Treatter Check			
Defects found on Vehicle / Treatter:			
Snow Plough Blade Fitting			
Snow Plough Blade Type:		Snow Plough Blade Serial No.:	
Start Time of Fitting:		Finish Time of Fitting:	
Duration of Fitting:			
Problems in fitting snow plough:			
Defects found on snow plough:			
Route No.			
Time out of Depot		Time Start Route	
Time Finish Route		Time Back to Depot	
Route Treatment Time:		Planned Length:	
Planned Time:		Actual Length:	
Difference:		Difference:	
Problems found on Route:			

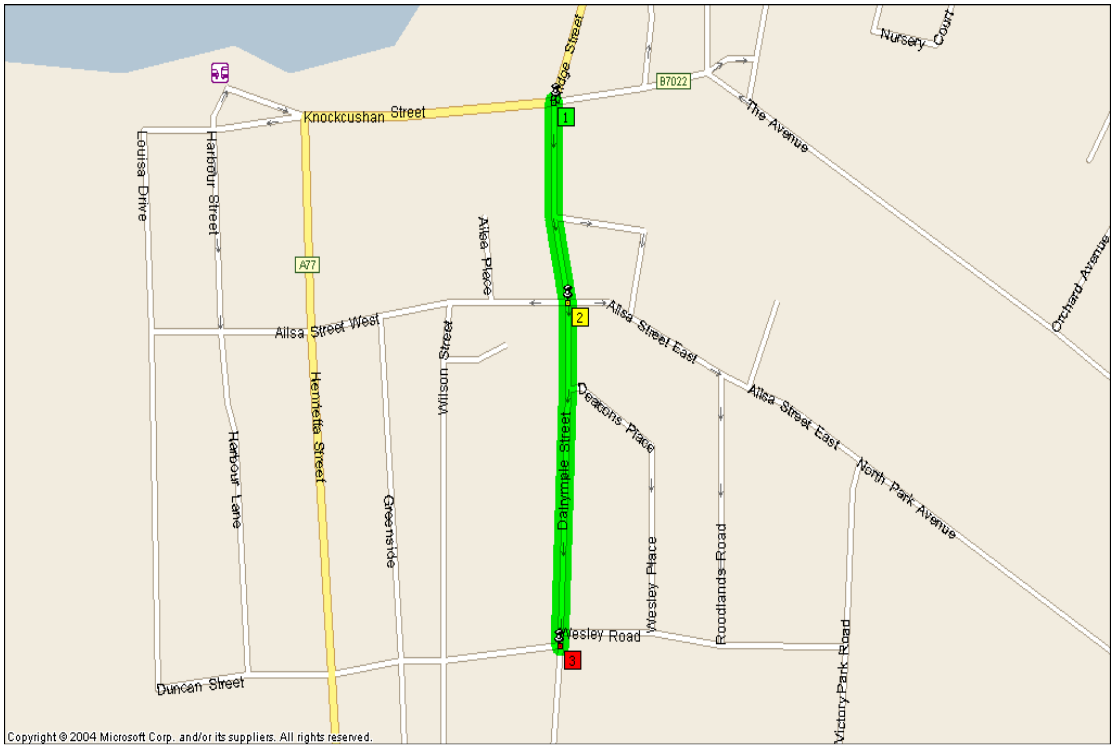
Signed Operator:		Signed Duty Supervisor:	

Appendix 8

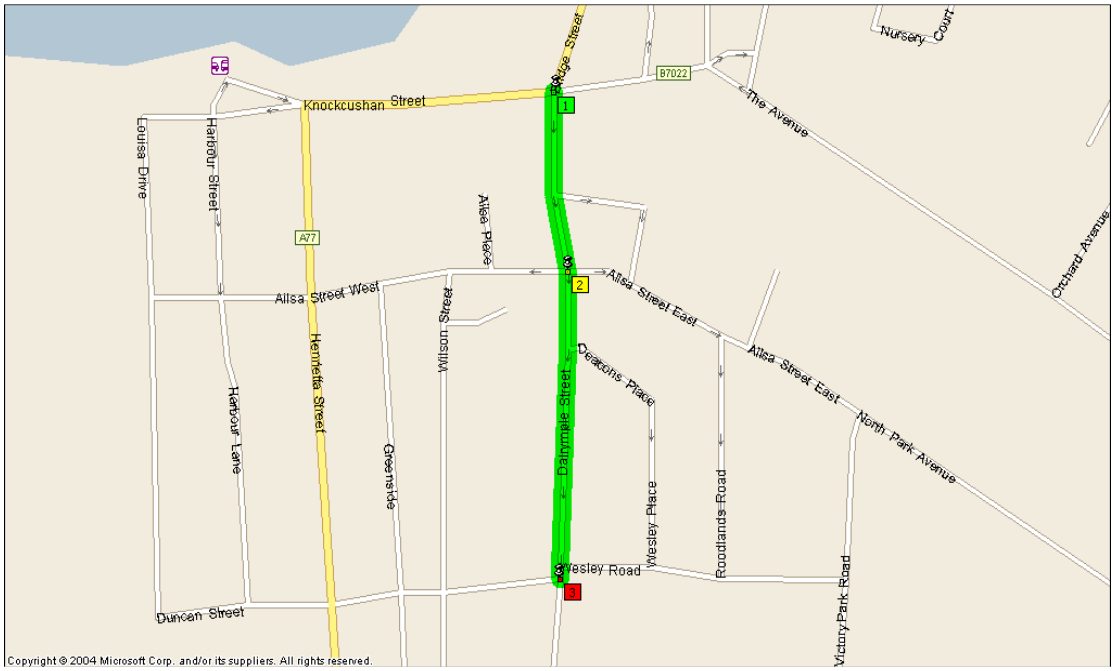
Footway Clearance Maps



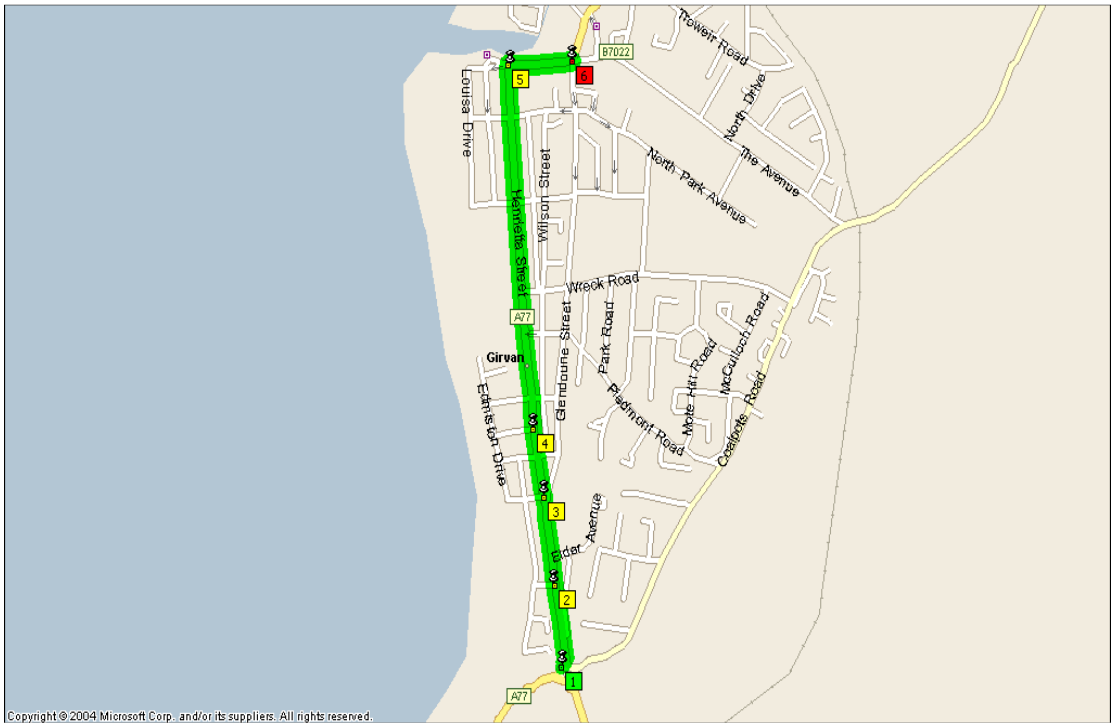
East Kilbride Cat A and B



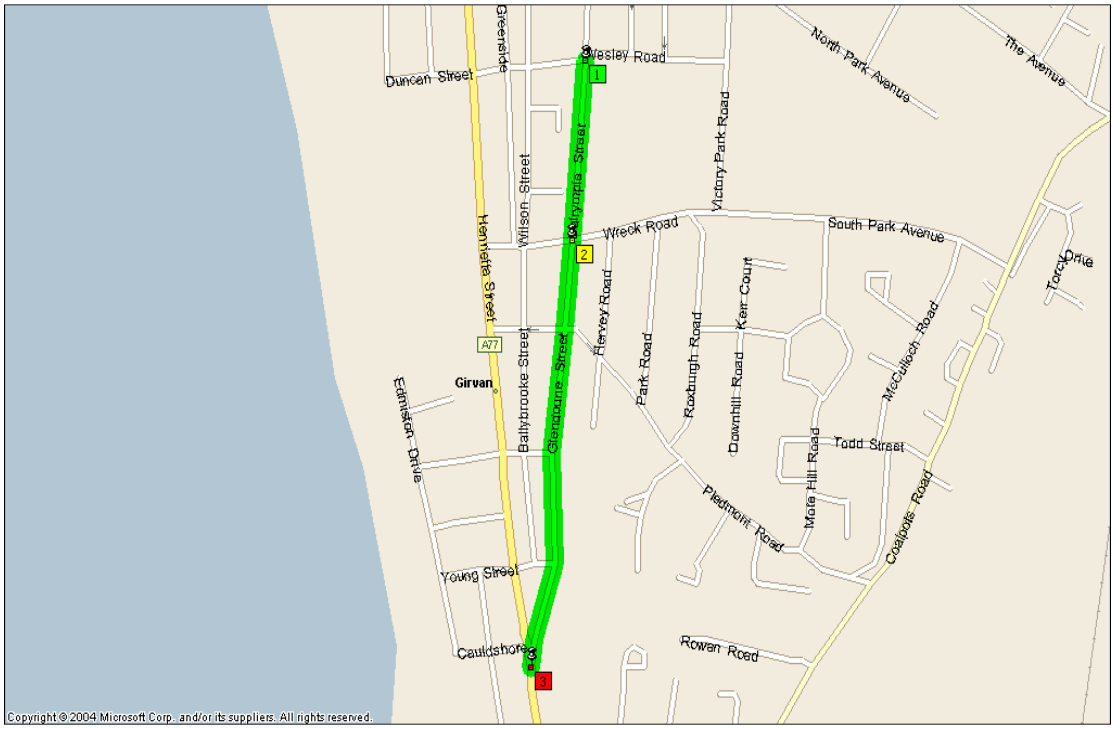
Girvan Cat A



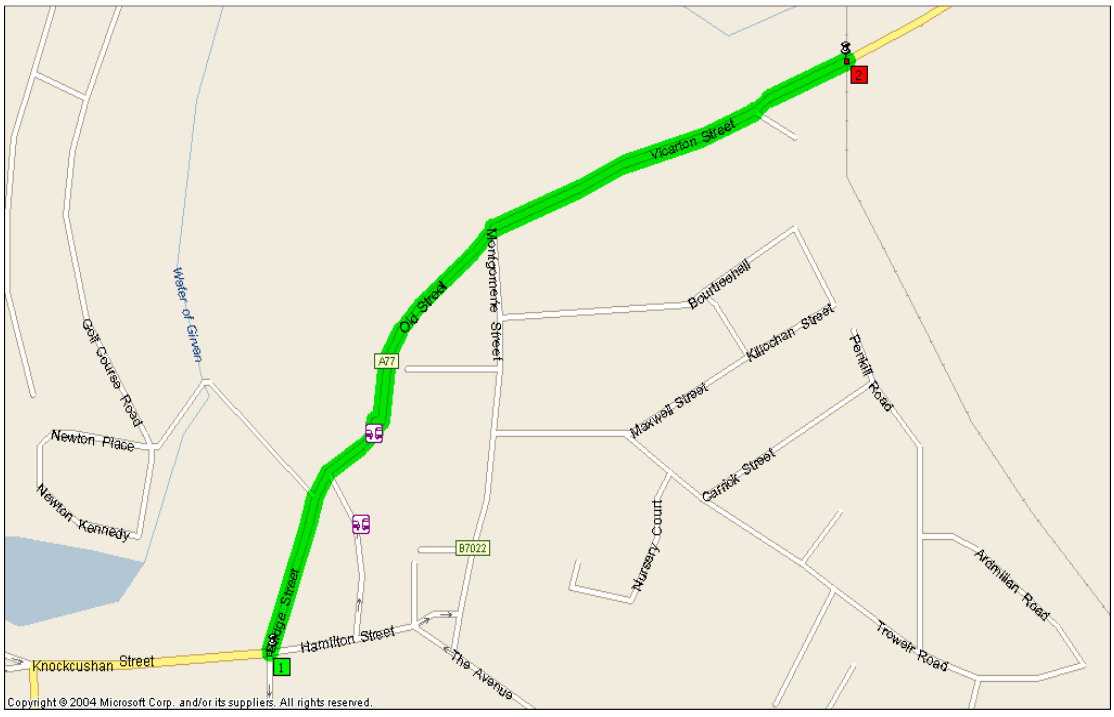
Girvan Cat B



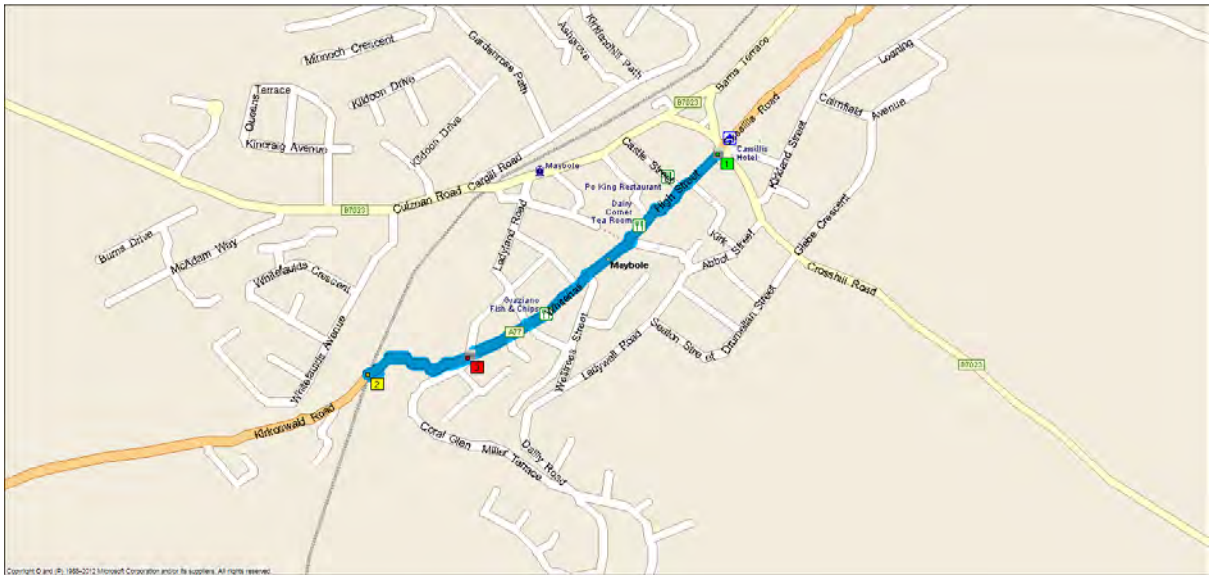
Girvan Cat C



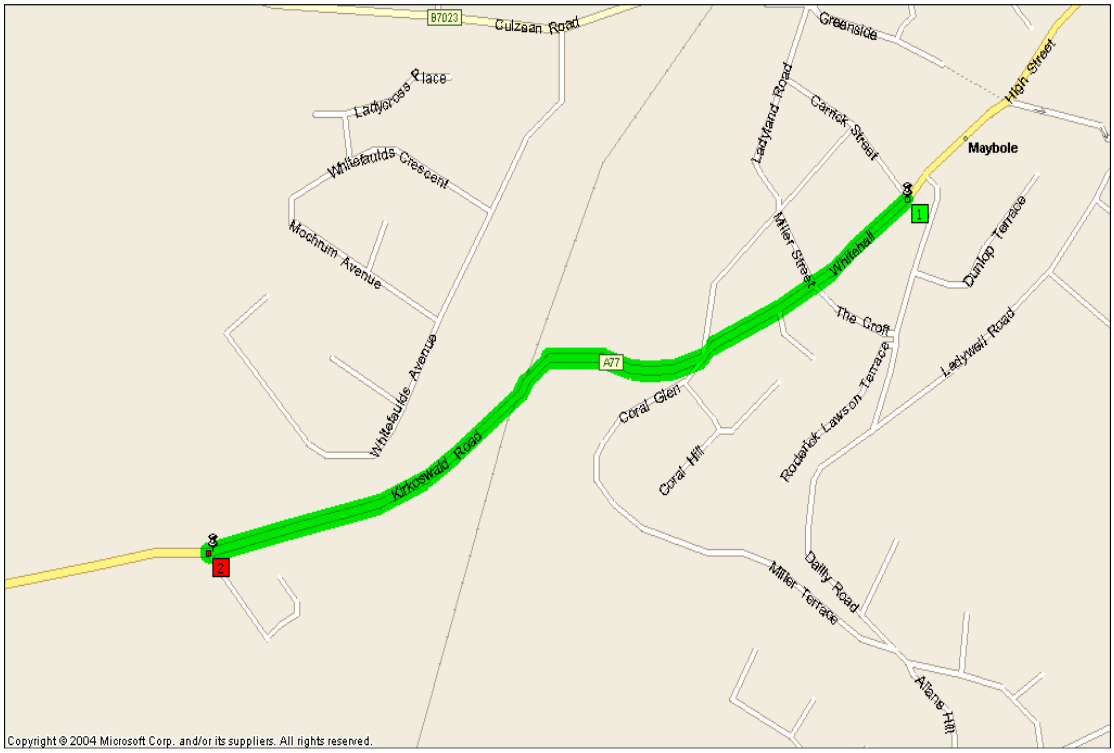
Girvan Cat C Footways



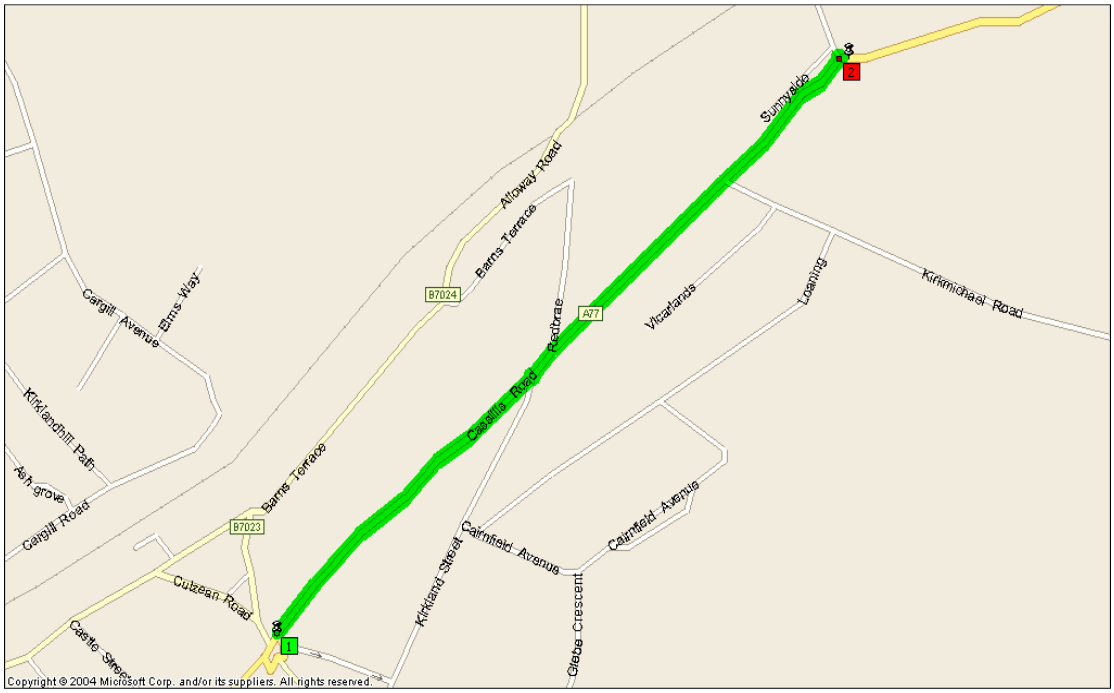
Girvan Cat C Footways



Maybole Cat A and B Footway



Maybole Cat C Footways



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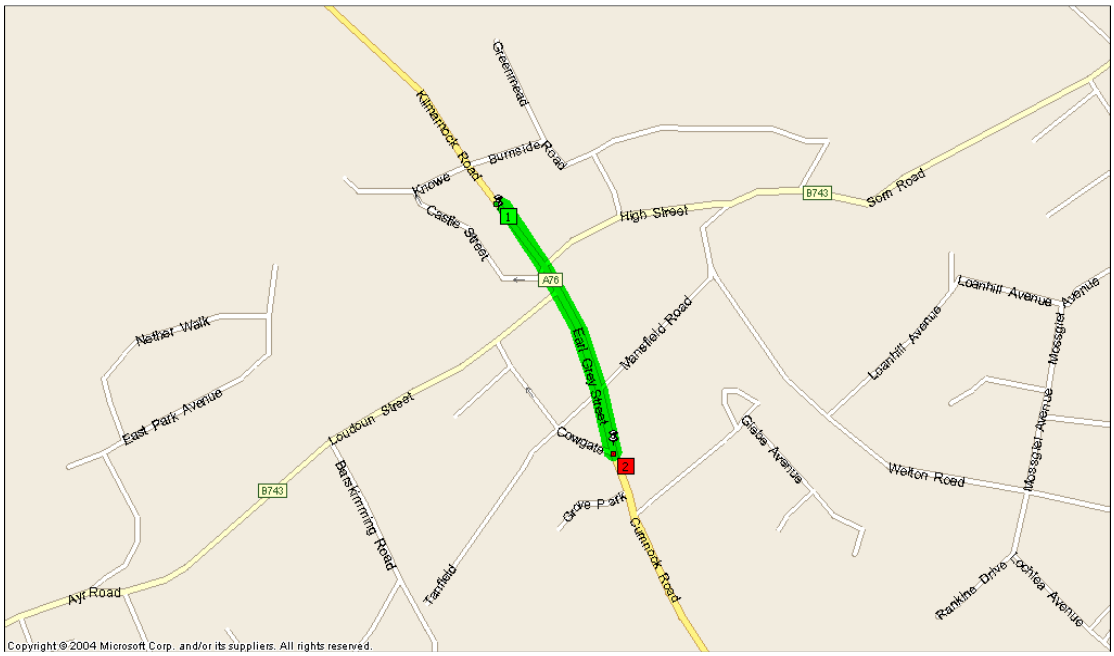
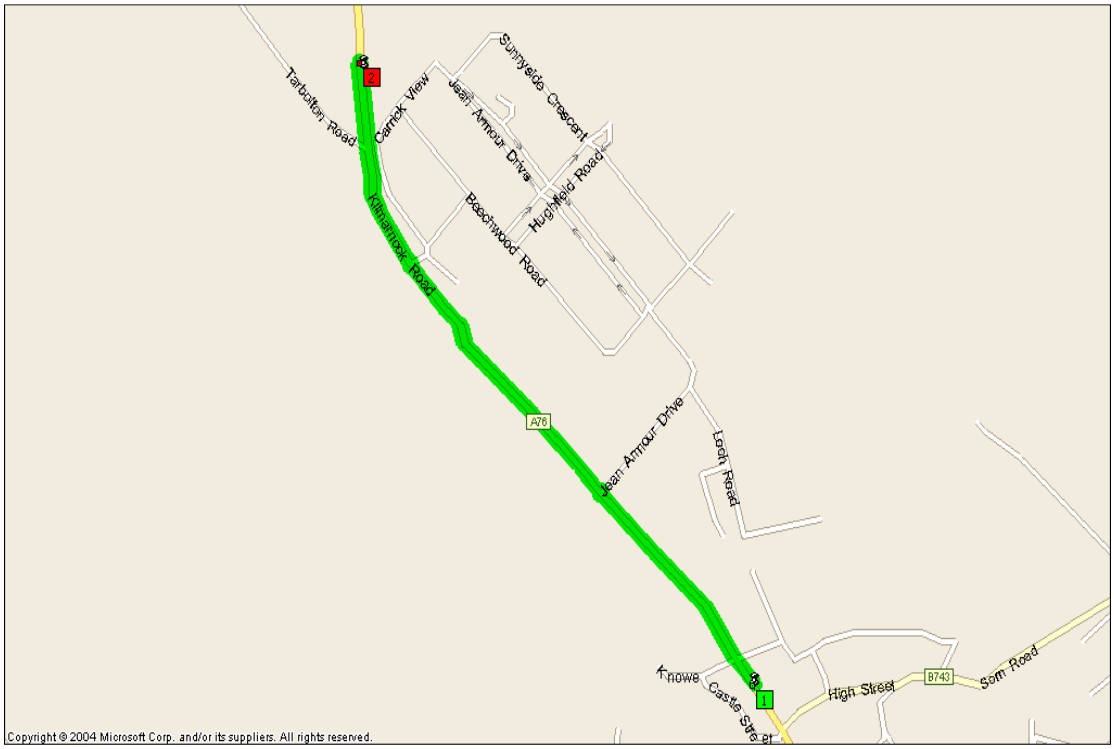
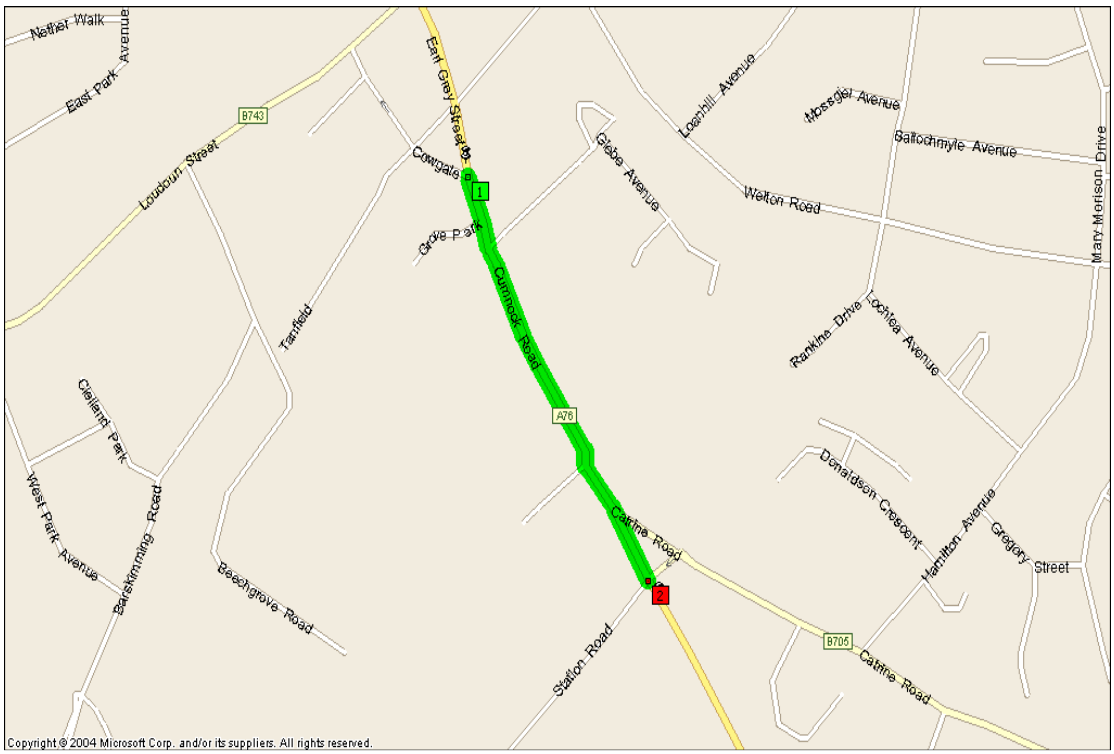


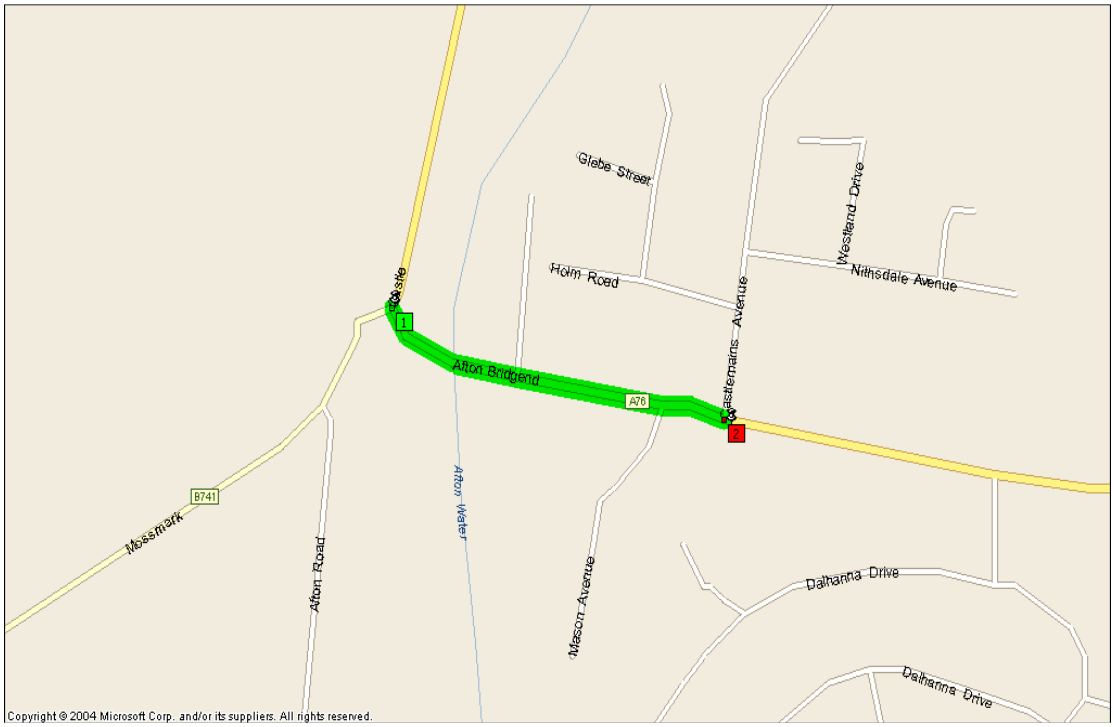
Mauchline Cat B Footways



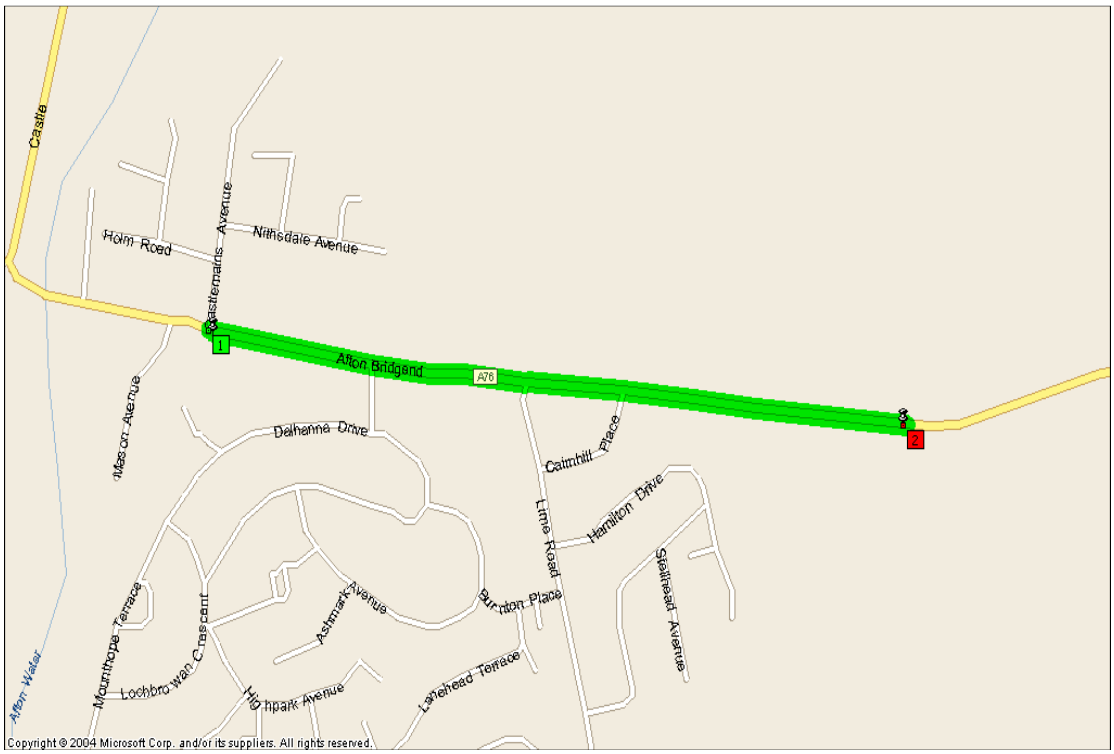
Mauchline Category D Footways



Mauchline Cat D Footways



New Cumnock Cat B Footways



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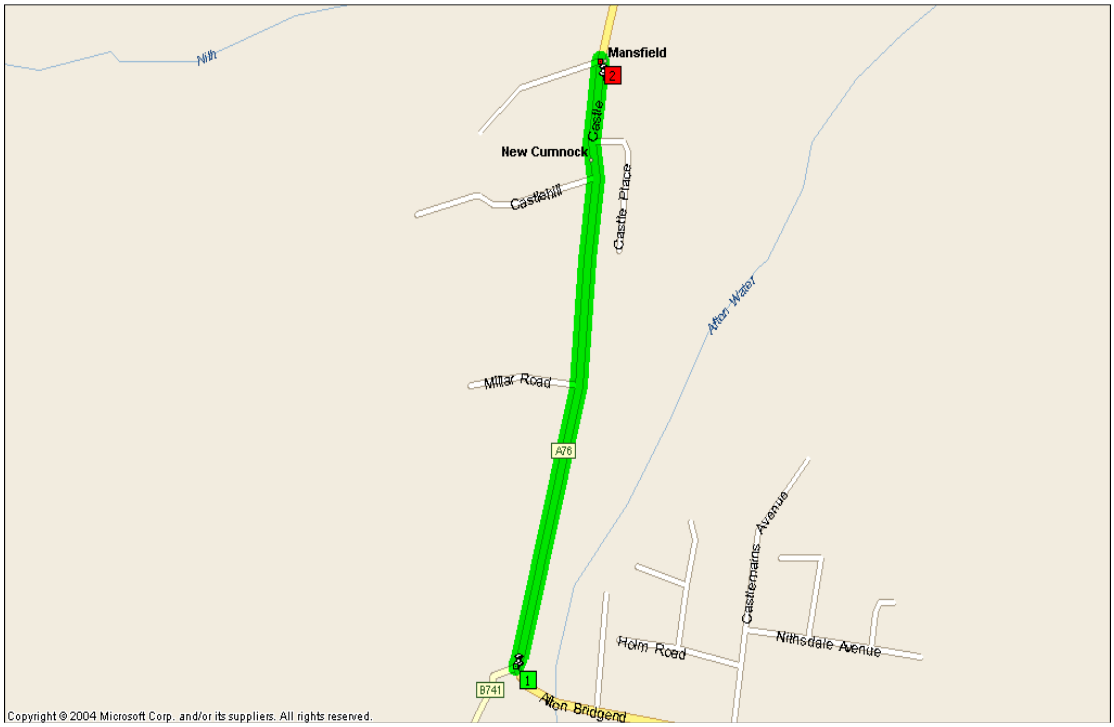

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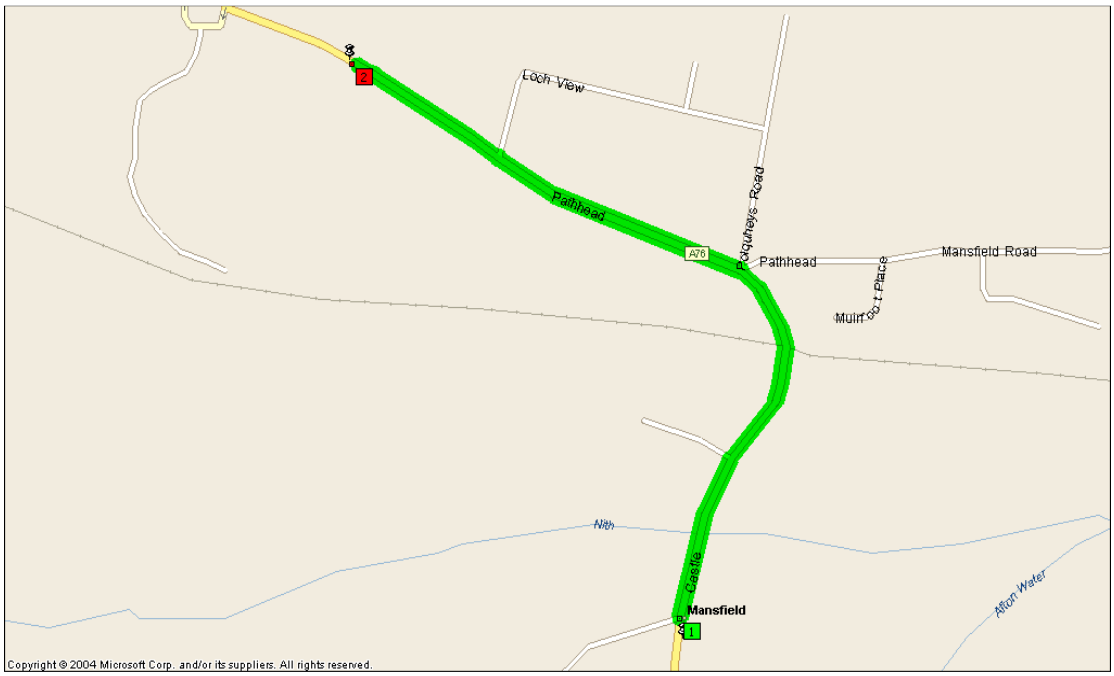
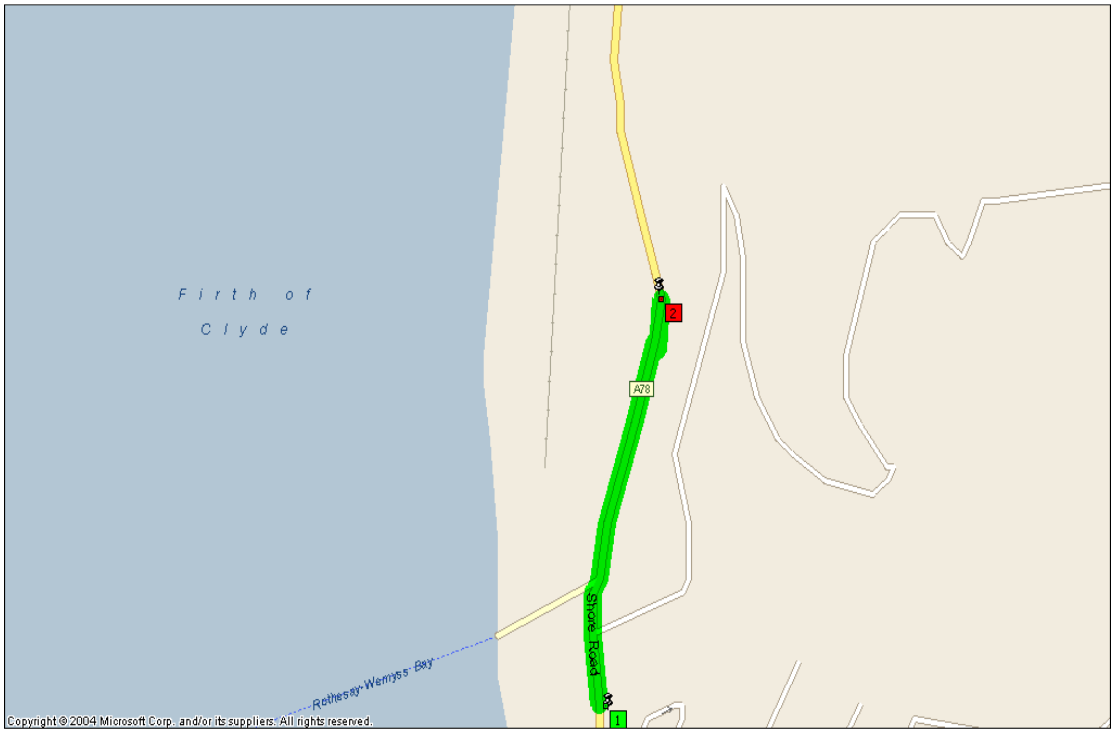
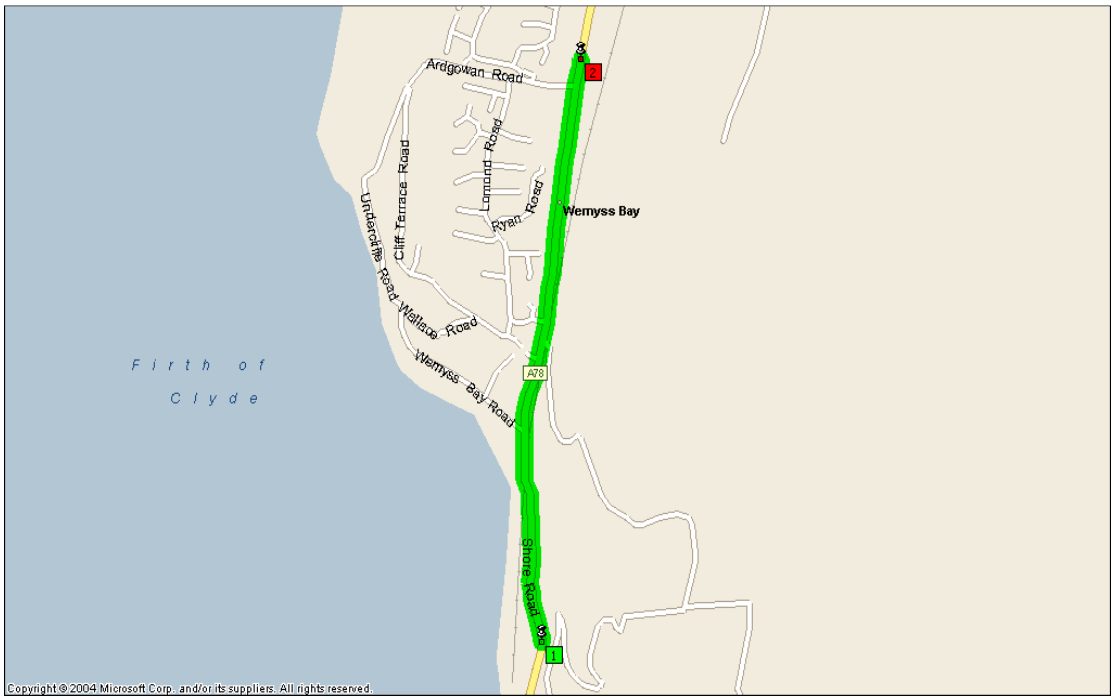


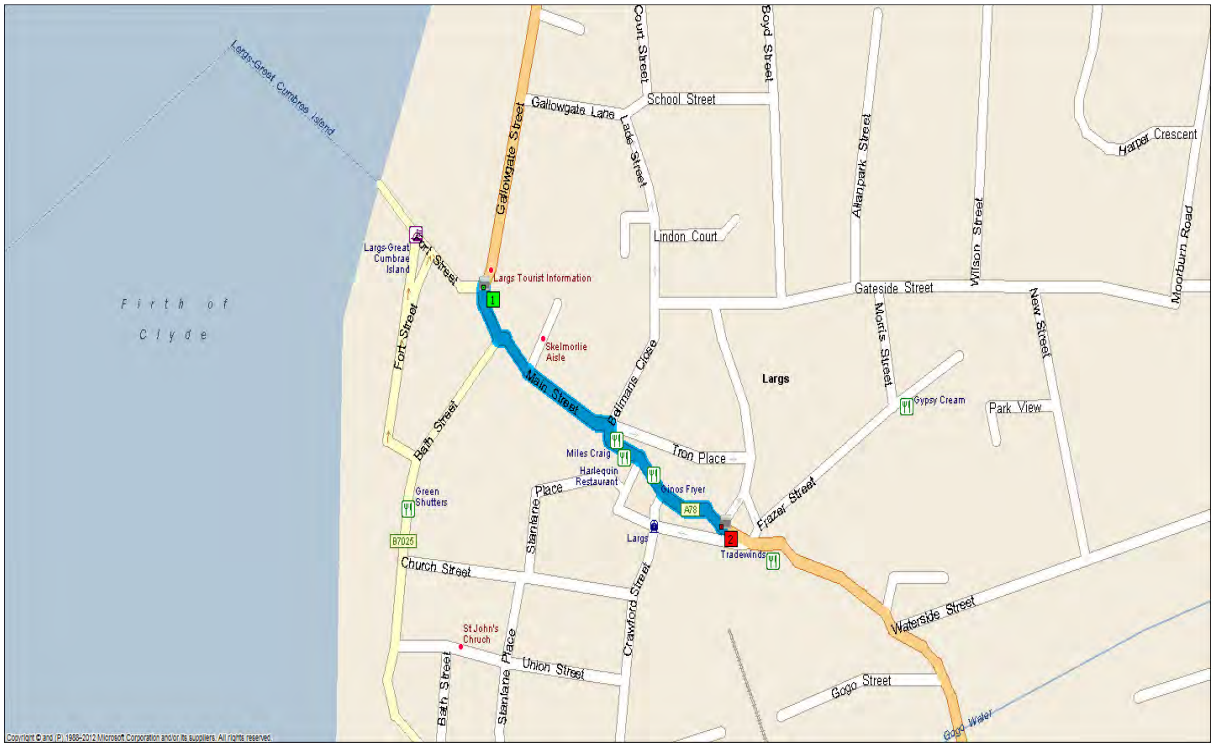
New Cumnock Cat D Footways



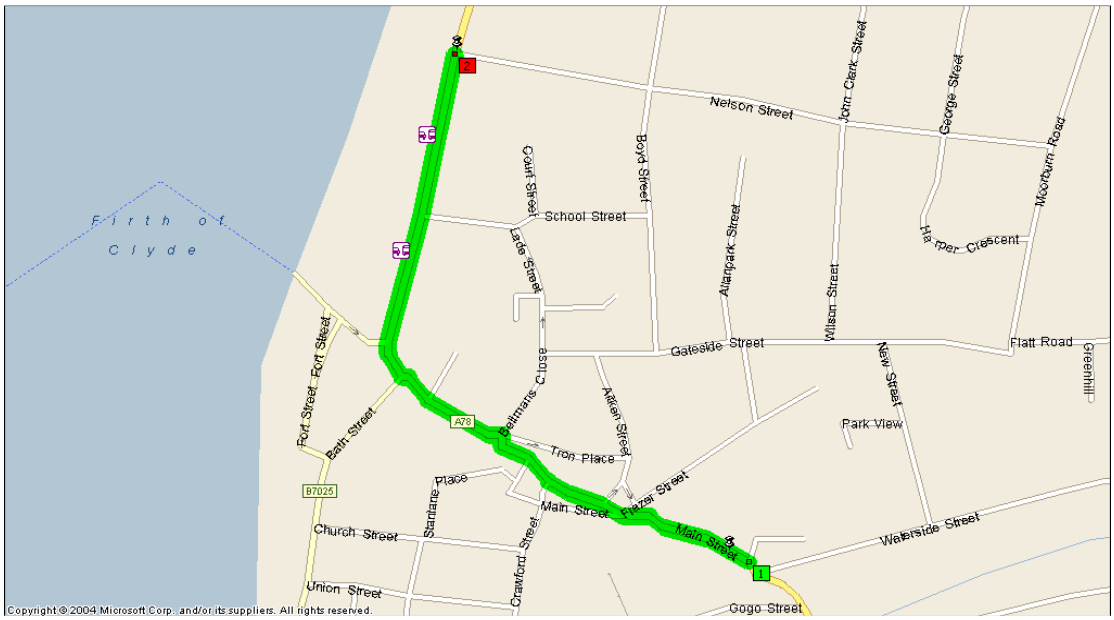
A78 Wemyss Bay Cat B Footways



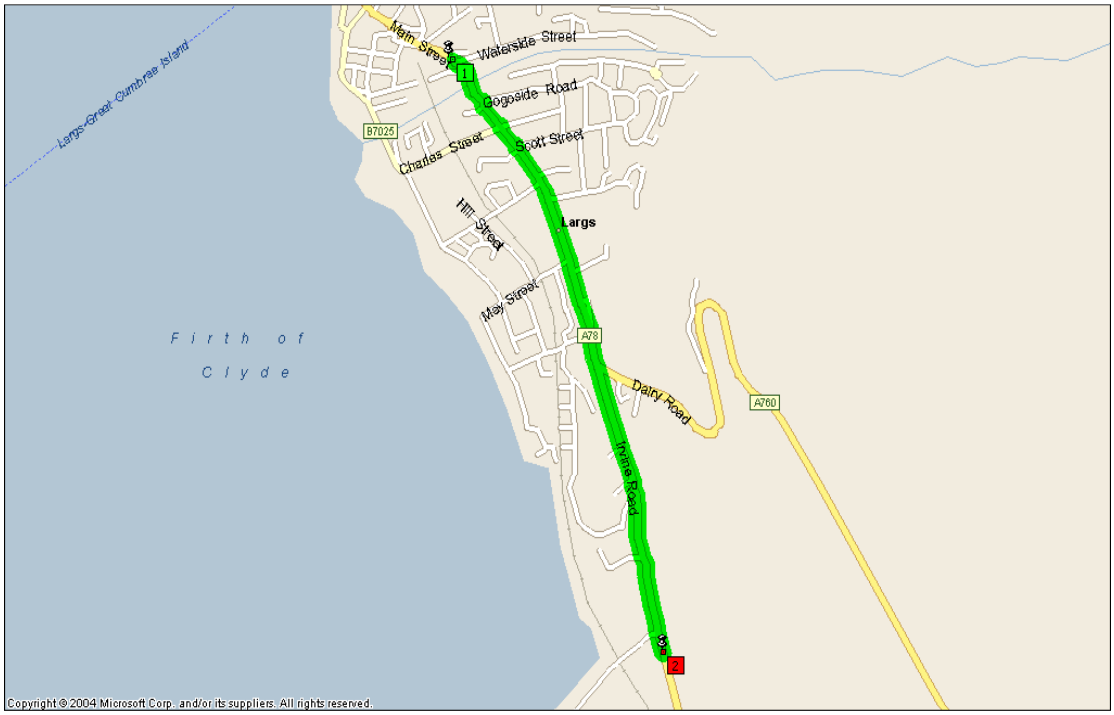
A78 Wemyss Bay Cat C Footways



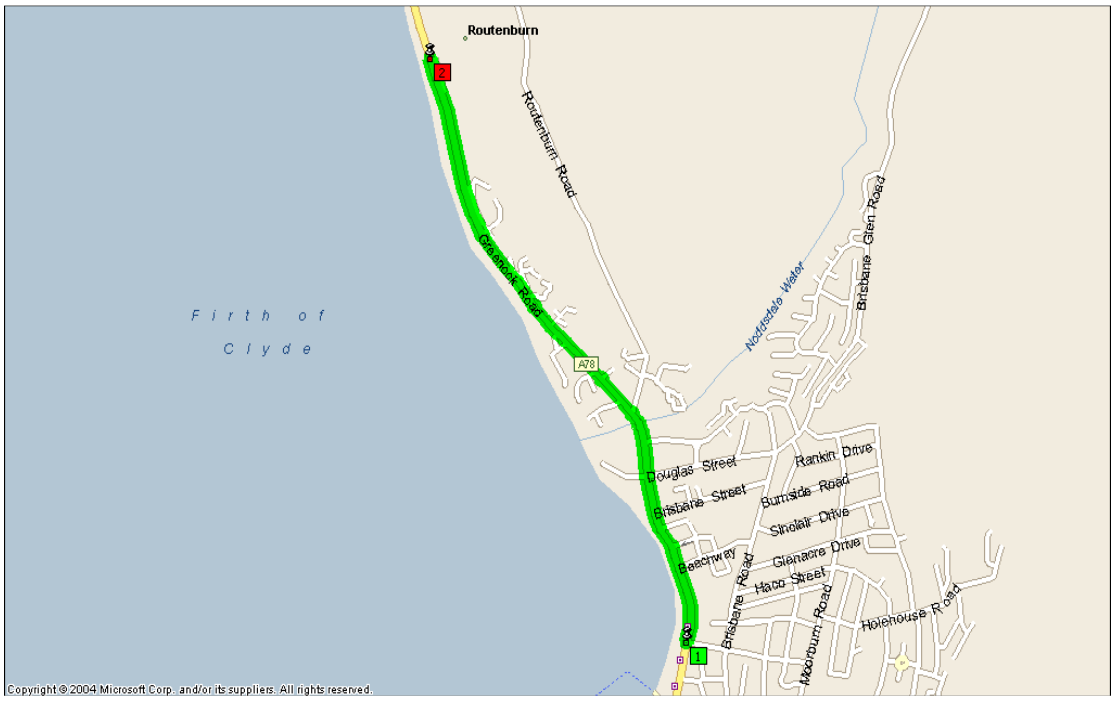
Largs Cat A



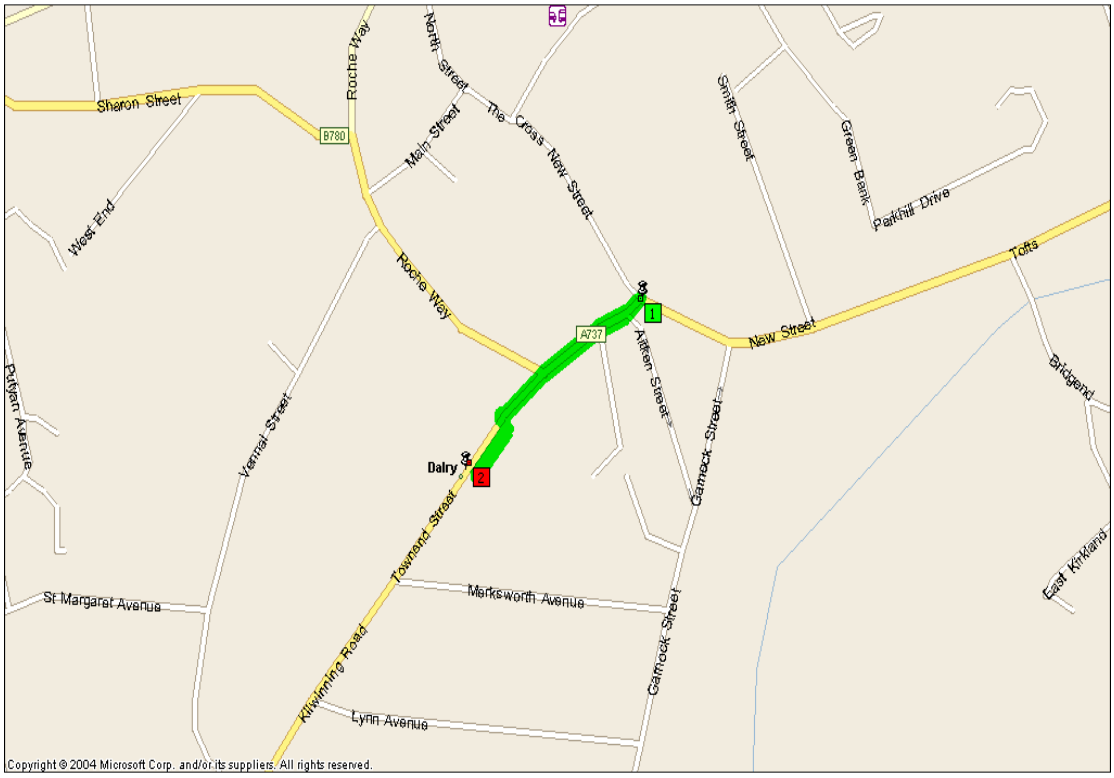
A78 Largs Cat B Footways



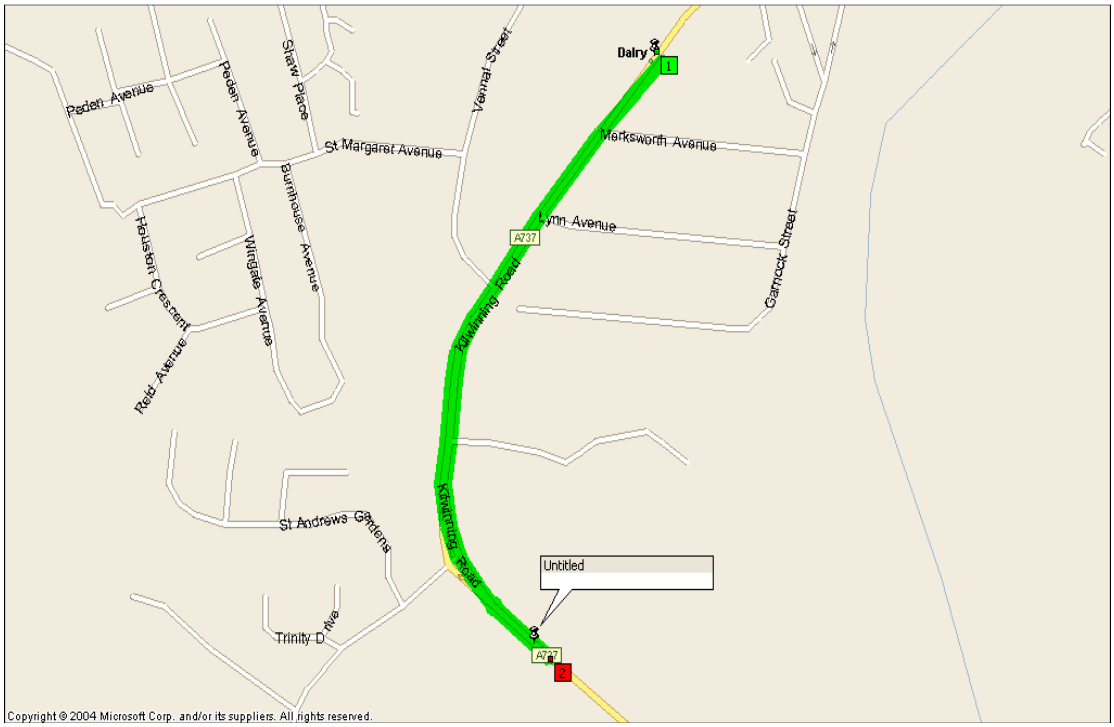
A78 Largs Cat C Footways



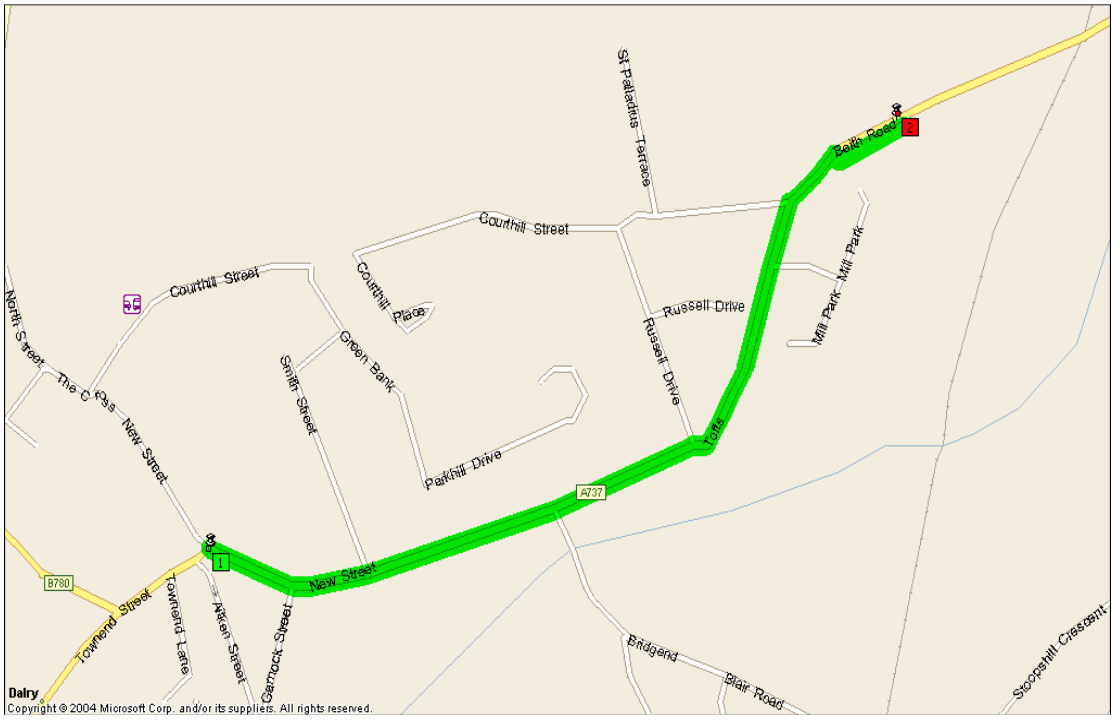
A78 Largs Cat C Footways



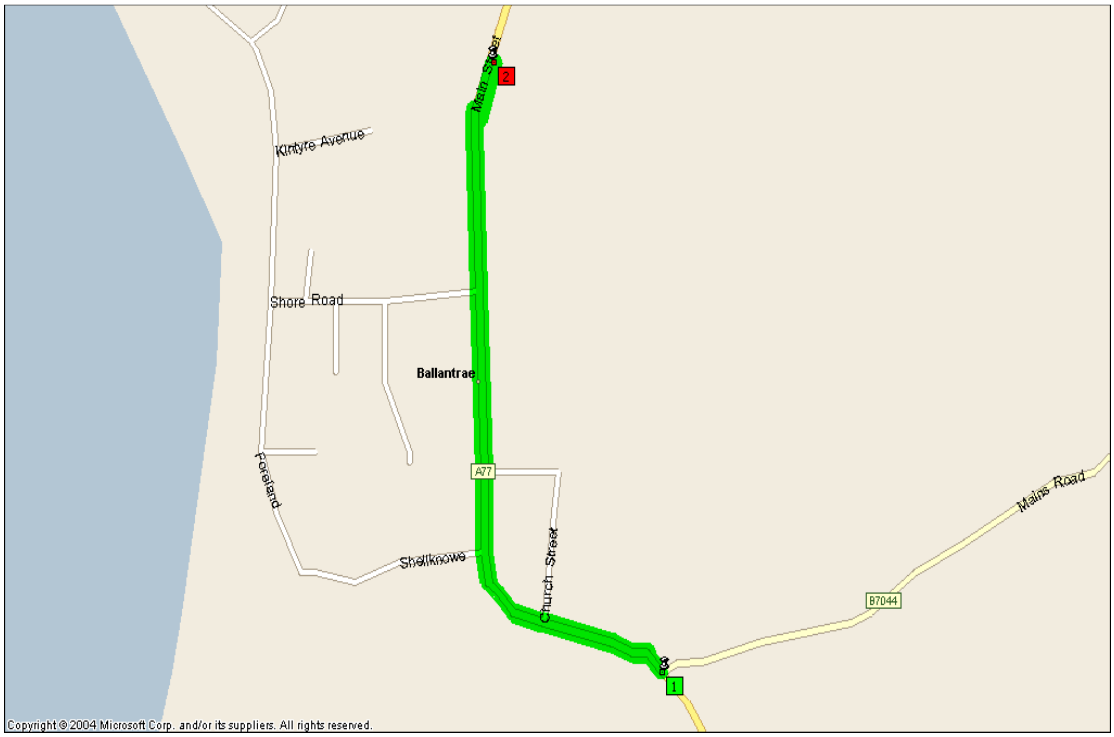
A737 Dalry Cat B Footways



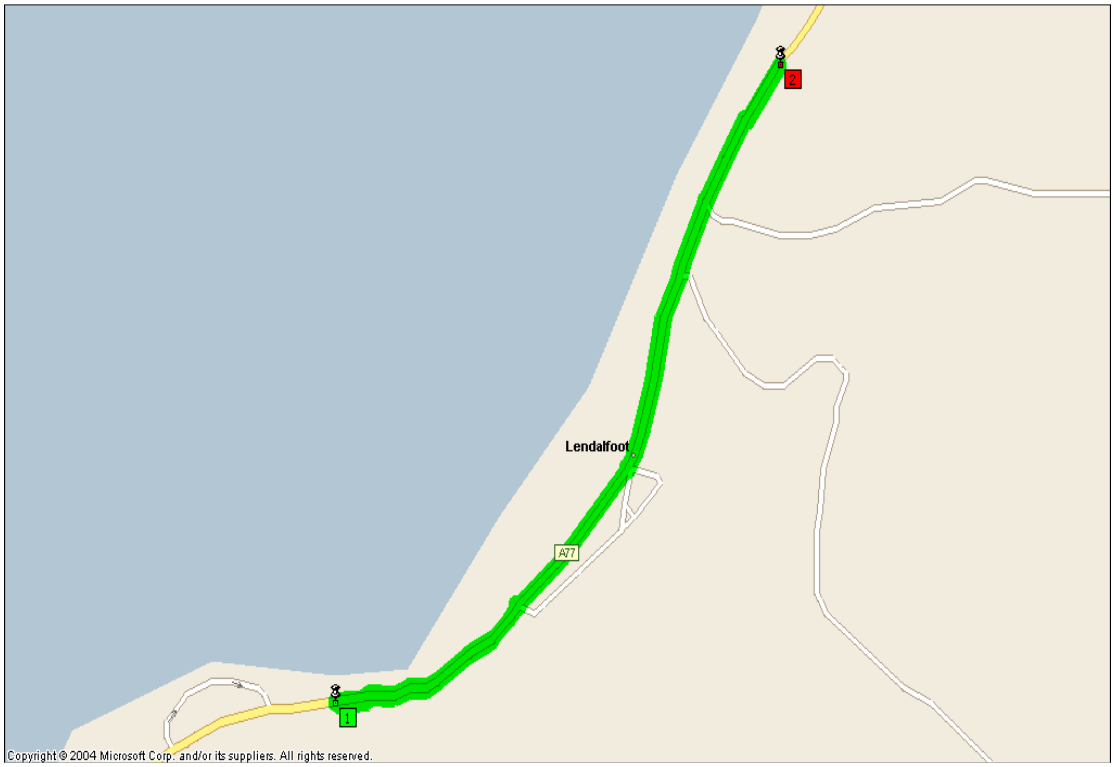
A737 Dalry Cat C Footways



A737 Dalry Cat C Footways

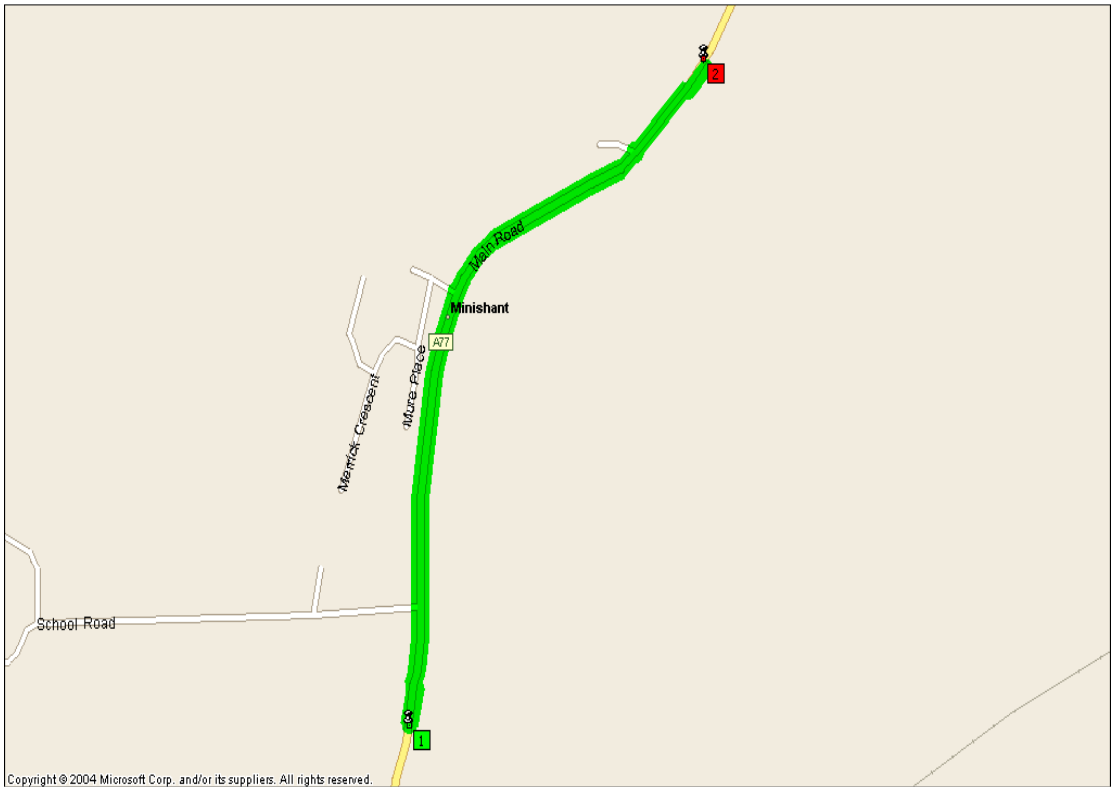


A77 Ballantrae Cat C Footways

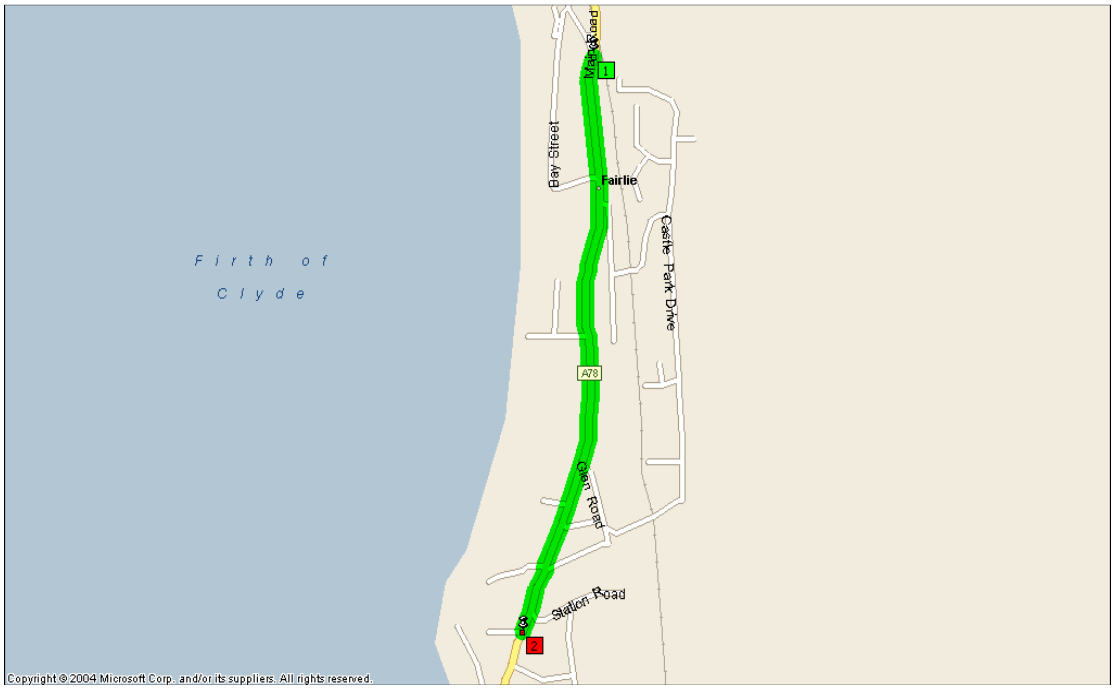


A77 Lendalfoot Footways

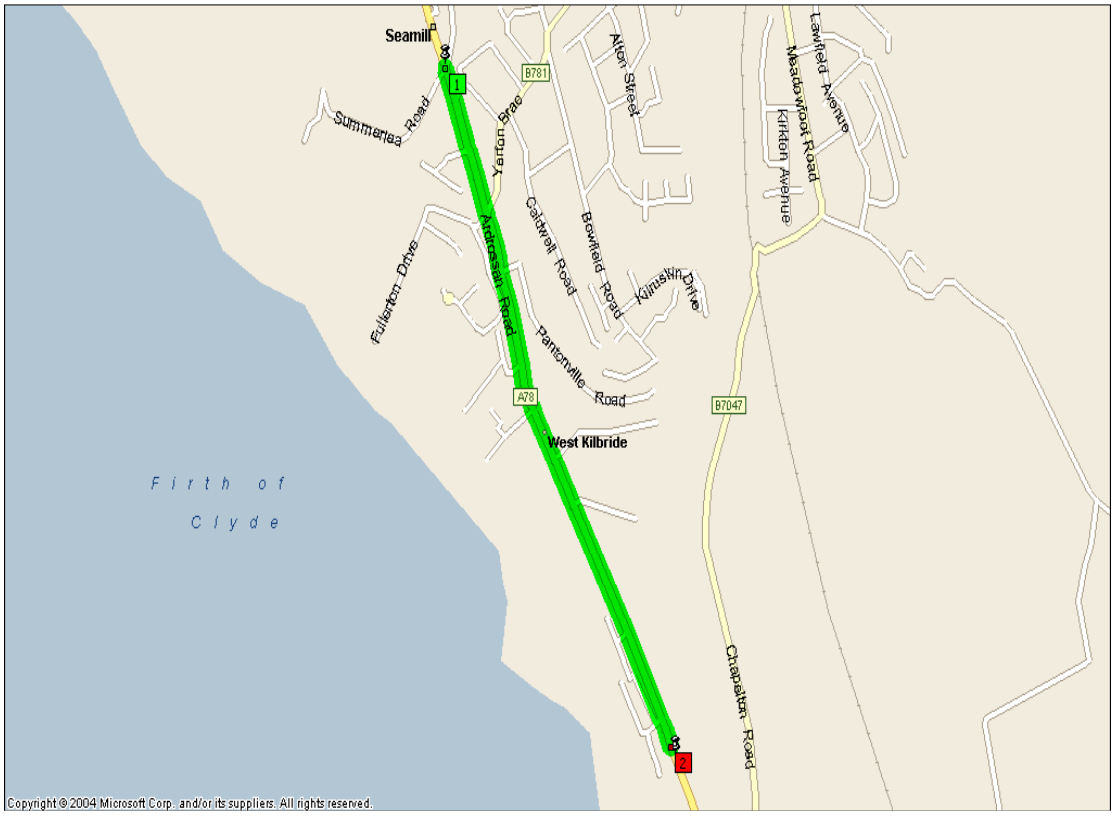
A77 Kirkoswald Cat C Footways



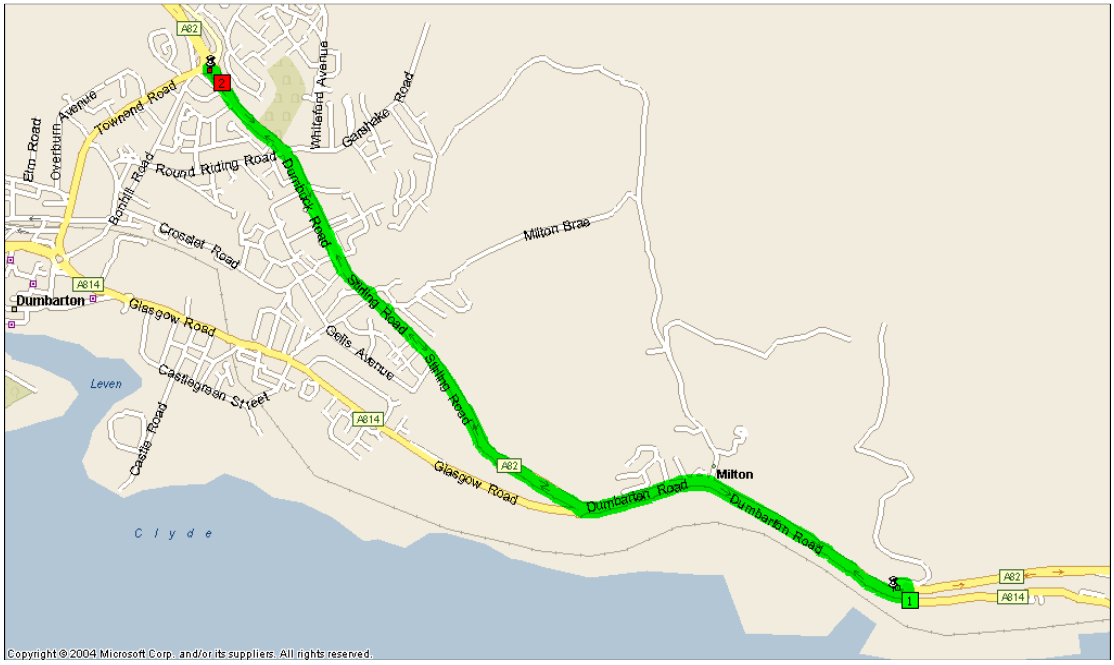
A77 Minishant Footways



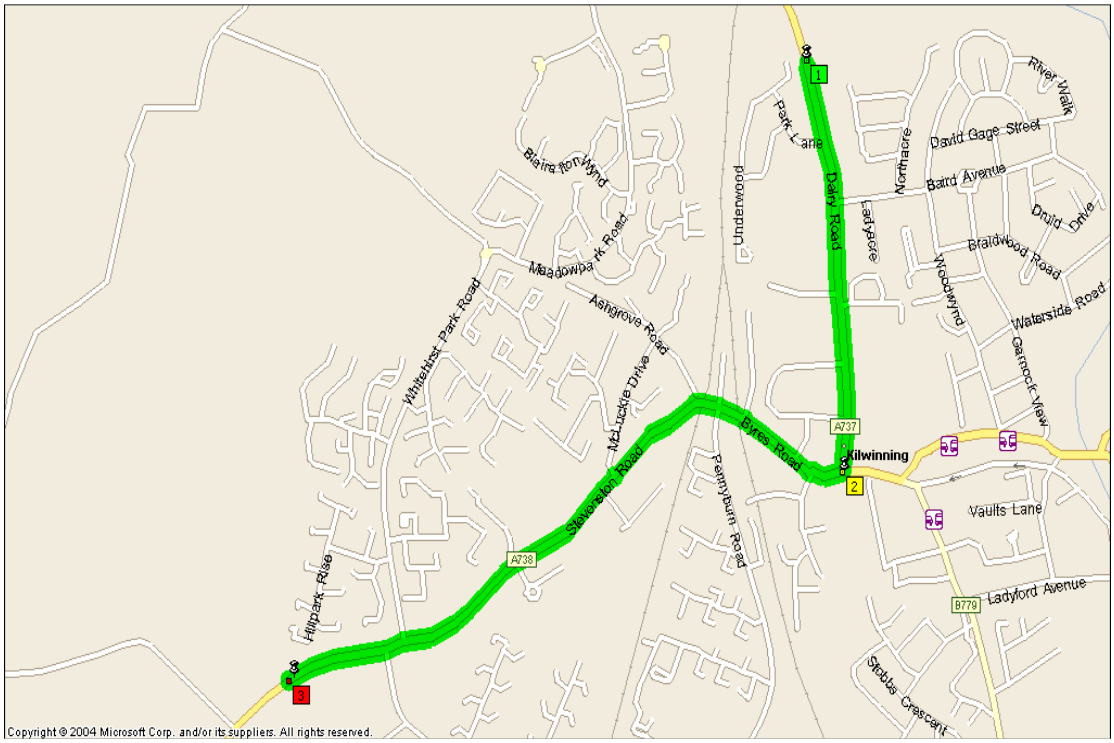
A78 Fairlie Cat C Footways



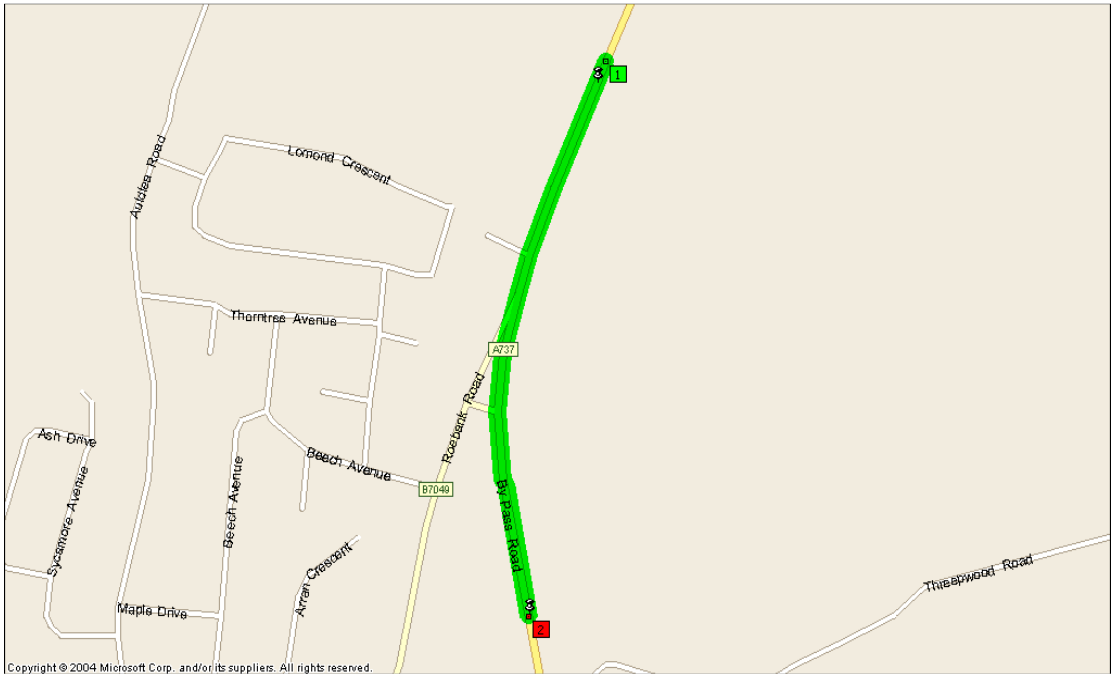
A78 Seamill Cat C Footways



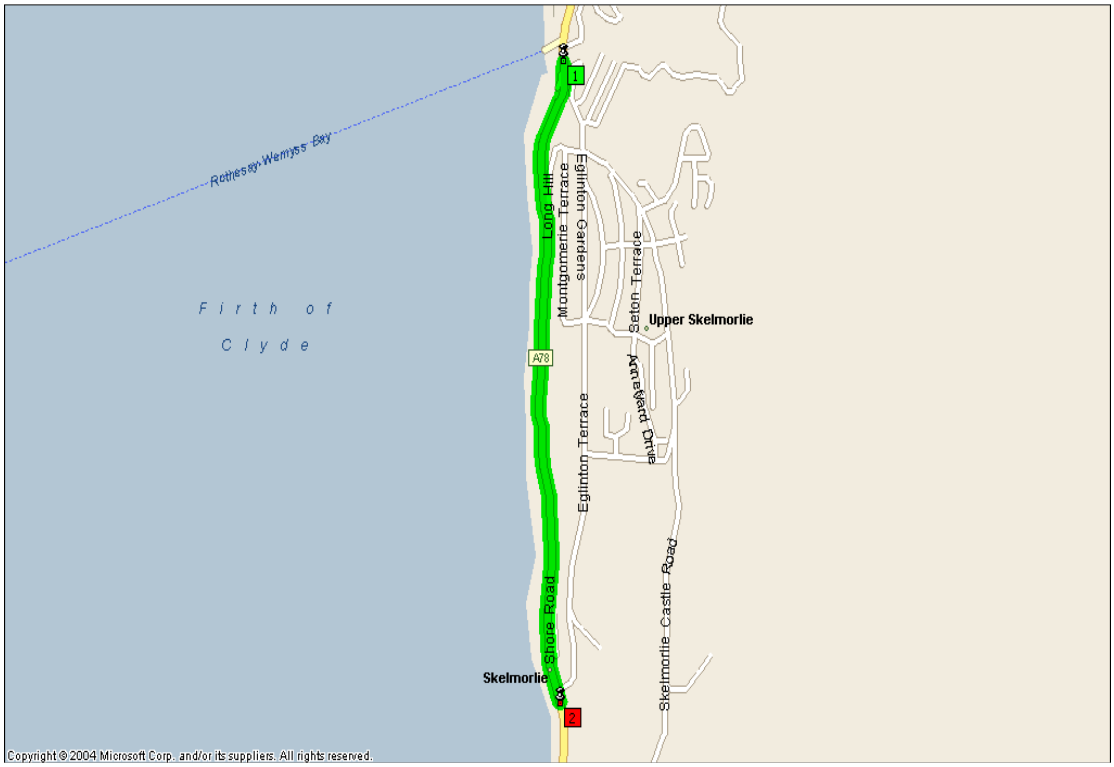
A82 Dumbarton Cat C Footways



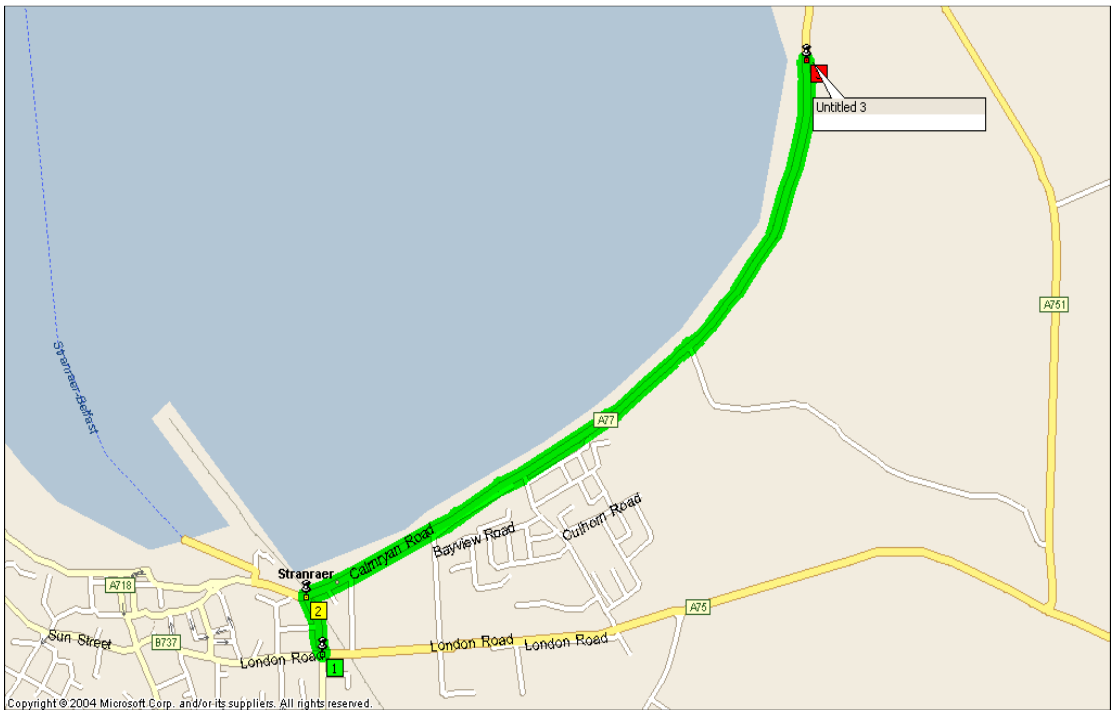
A737 / A738 Kilwinning Cat D Footways



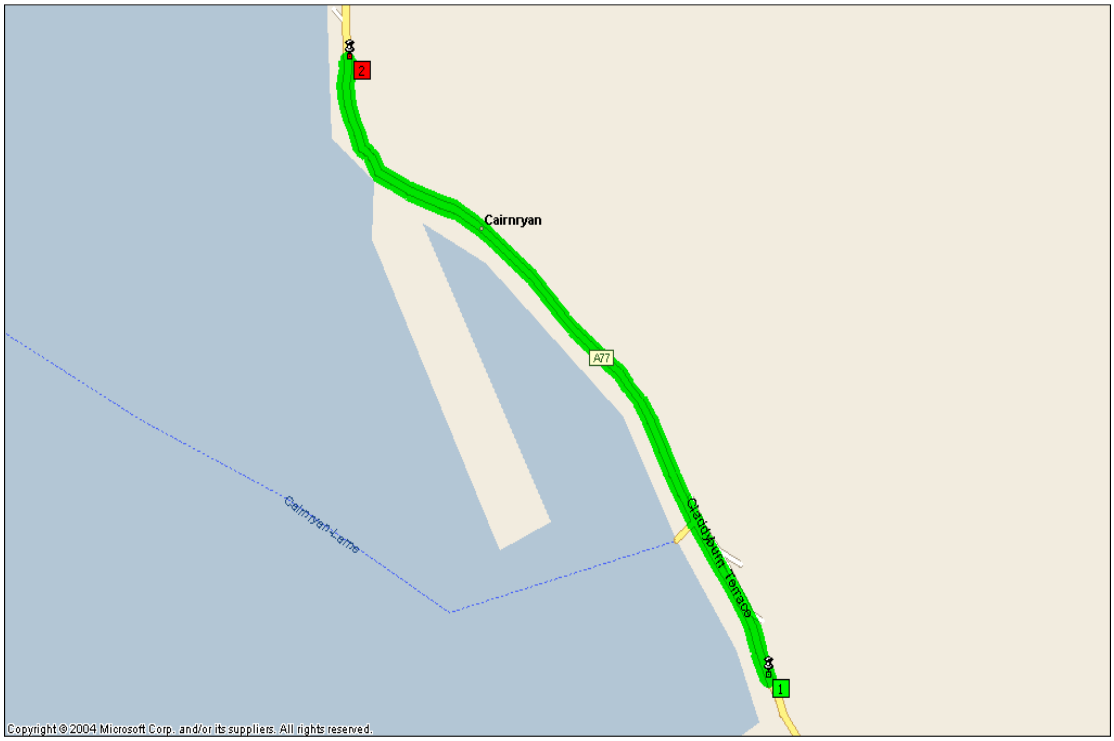
A737 Beith Cat D Footways



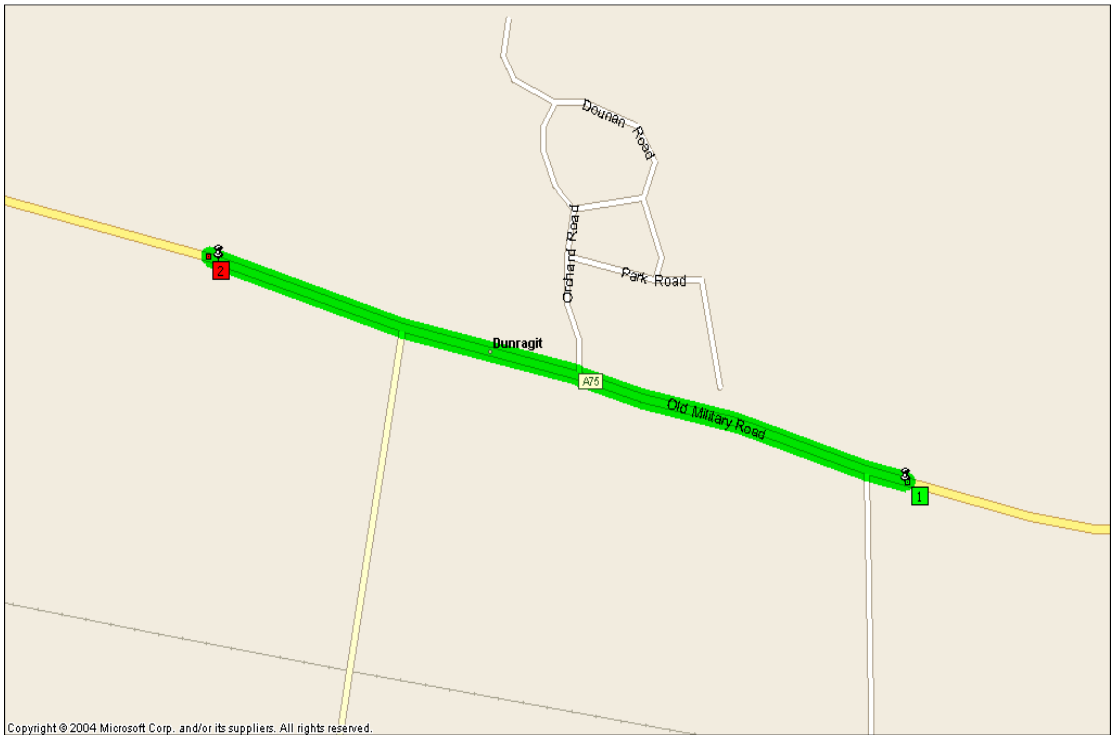
A78 Skelmorlie Cat C Footways



A77 Stranraer Cat C Footways



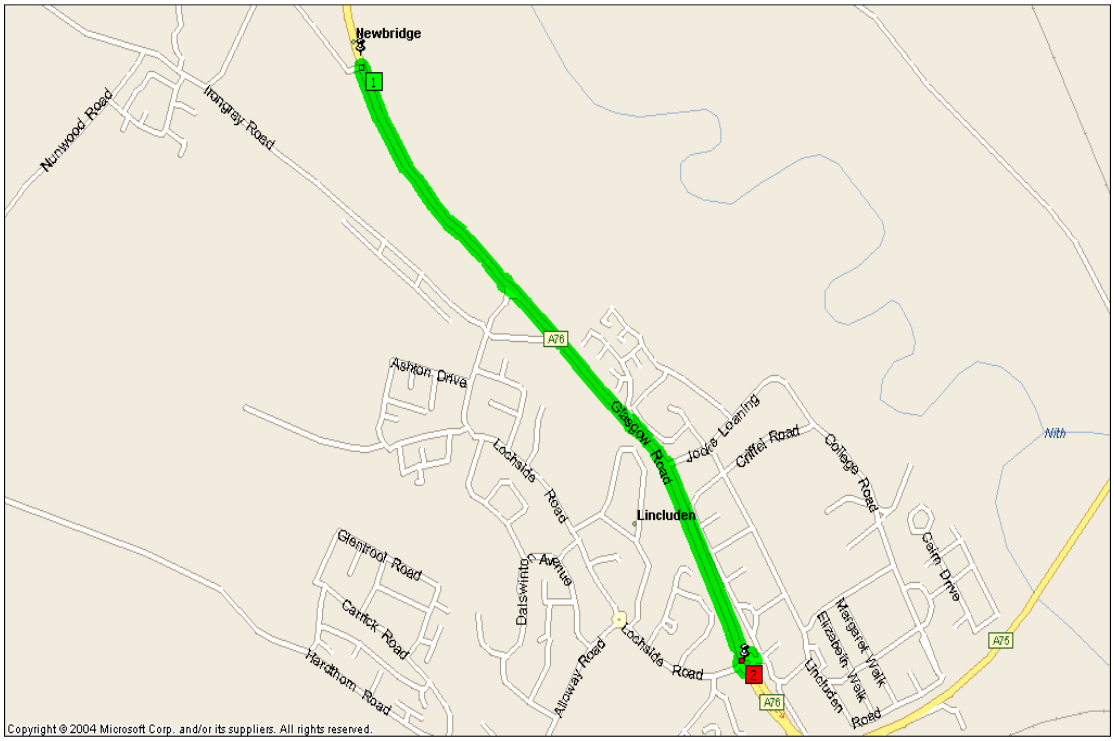
A77 Cairnryan Cat C Footways



A75 Dunragit Cat C Footways

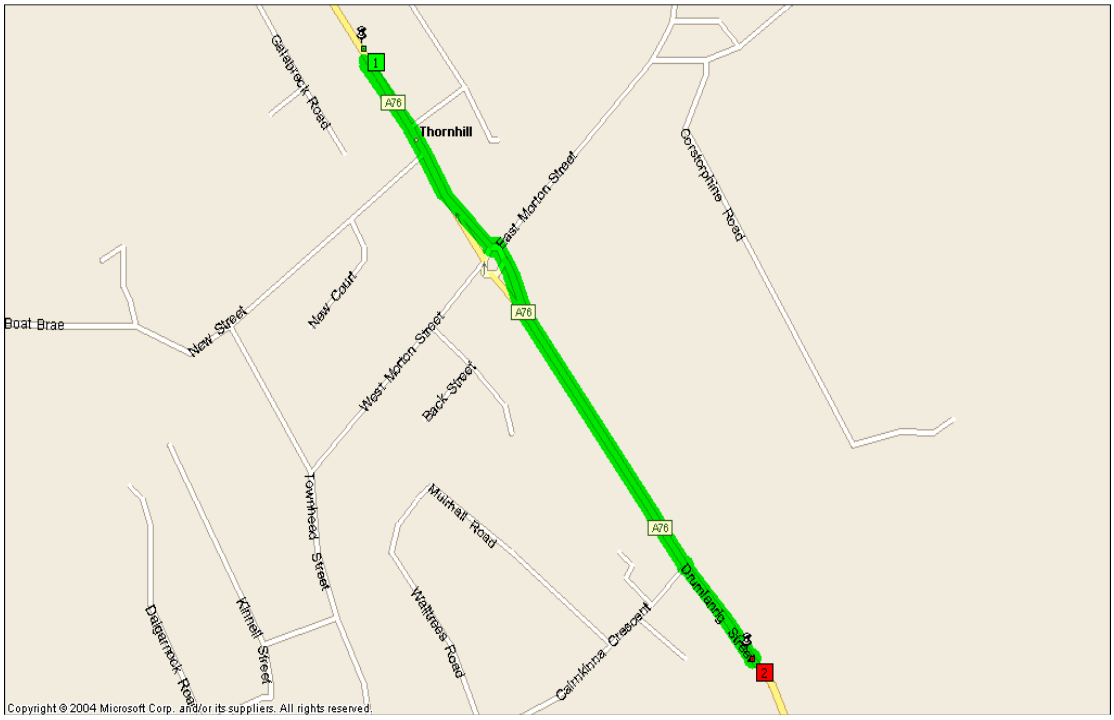
A75 Springholm Cat C Footways

A75 Crocketford Cat C Footway

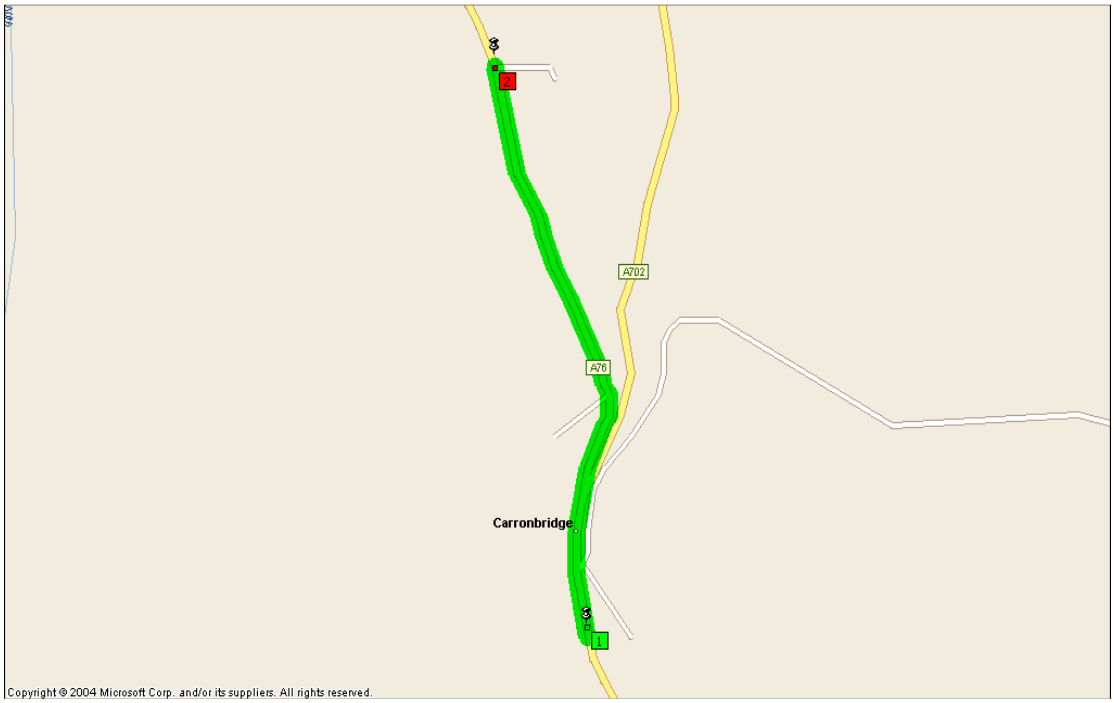


A76 Dumfries Cat C Footways

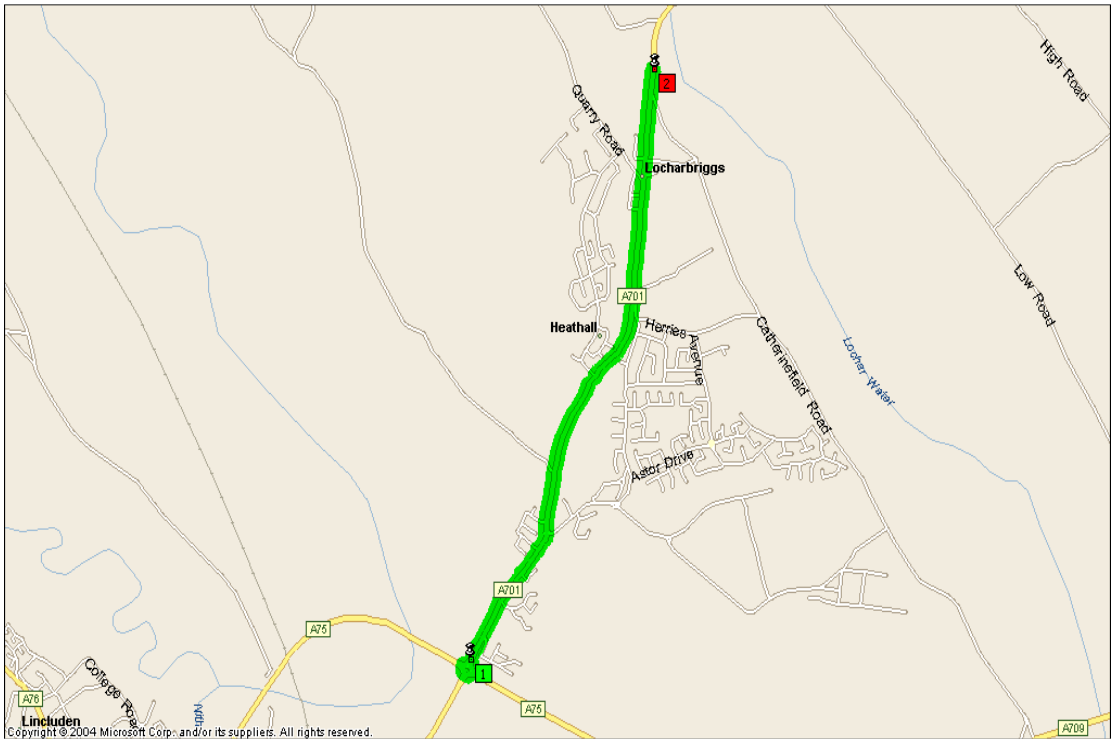
A76 Closeburn Cat C Footway



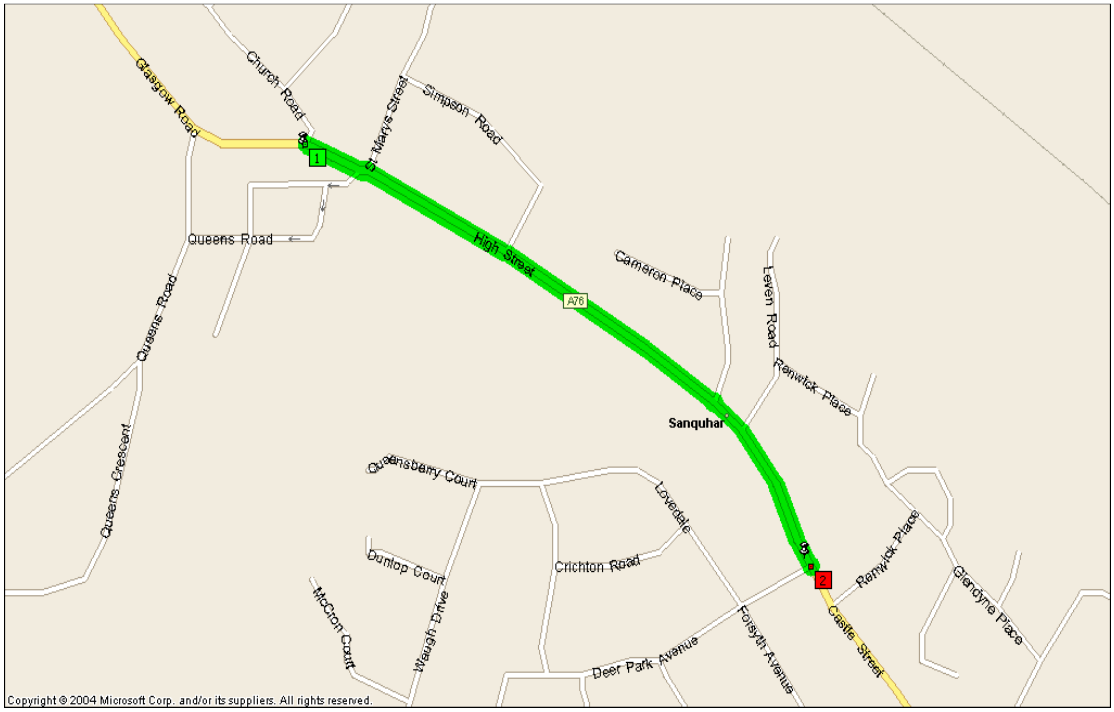
A76 Thornhill Cat C Footways



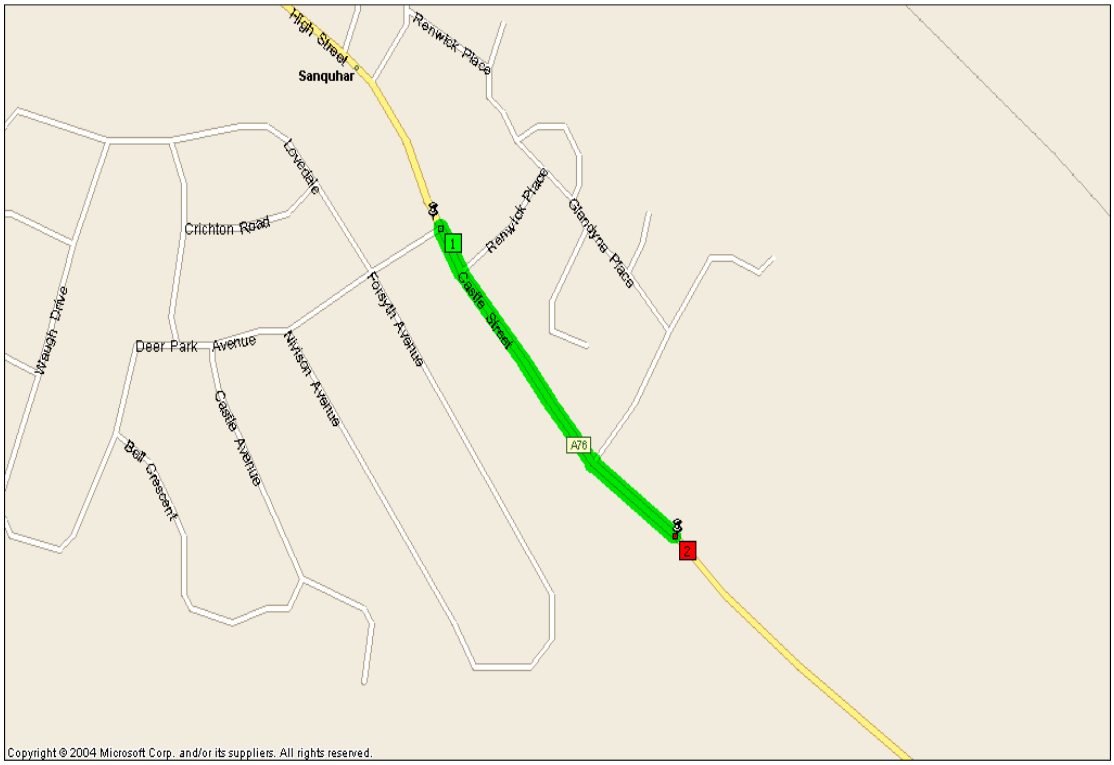
A76 Carronbridge Cat C Footways



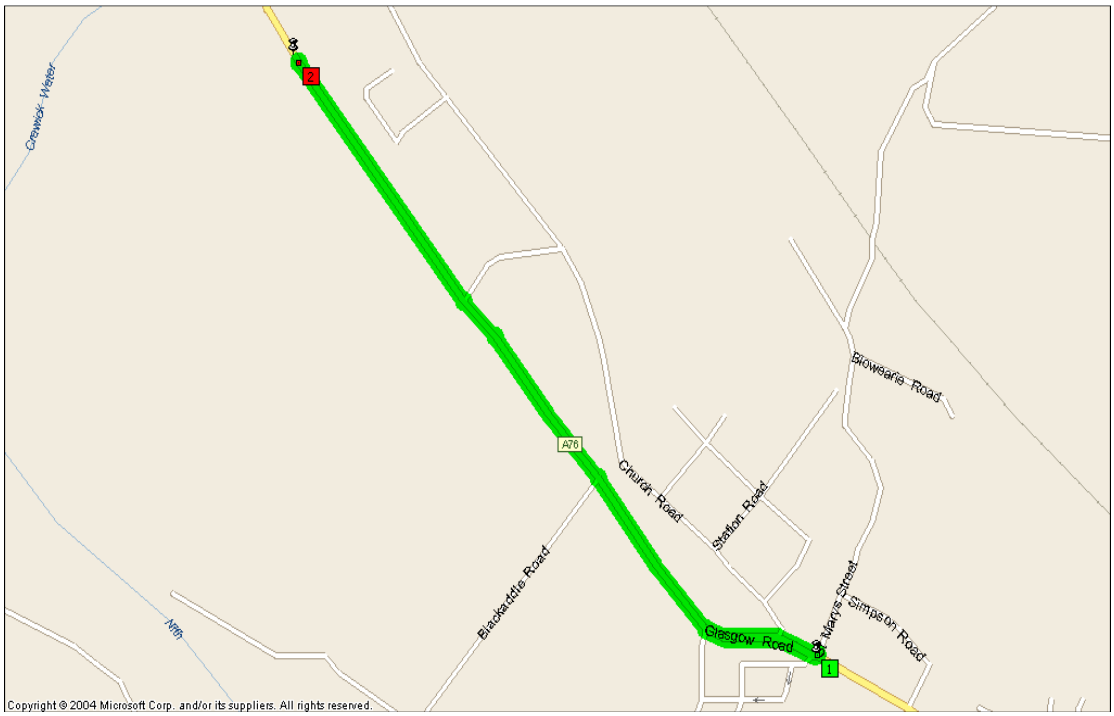
A701 Heathhall Cat C Footways



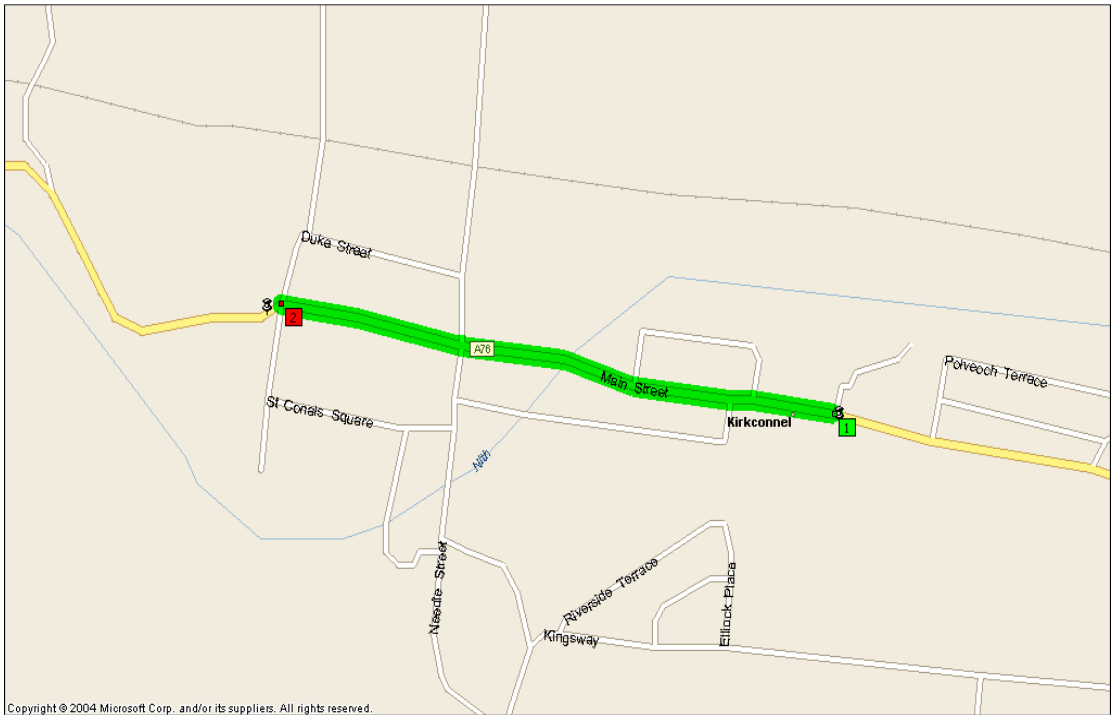
A76 Sanquhar Cat B Footways



A76 Sanquhar Cat D Footways

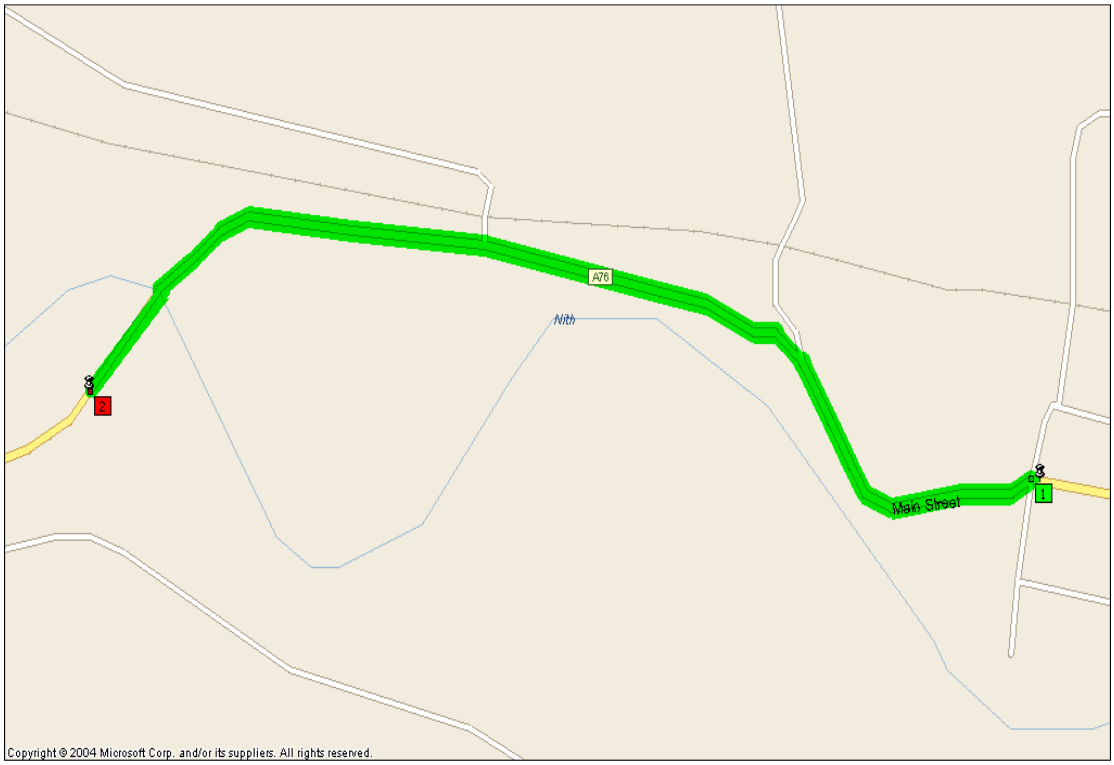


A76 Sanquhar Cat D Footways

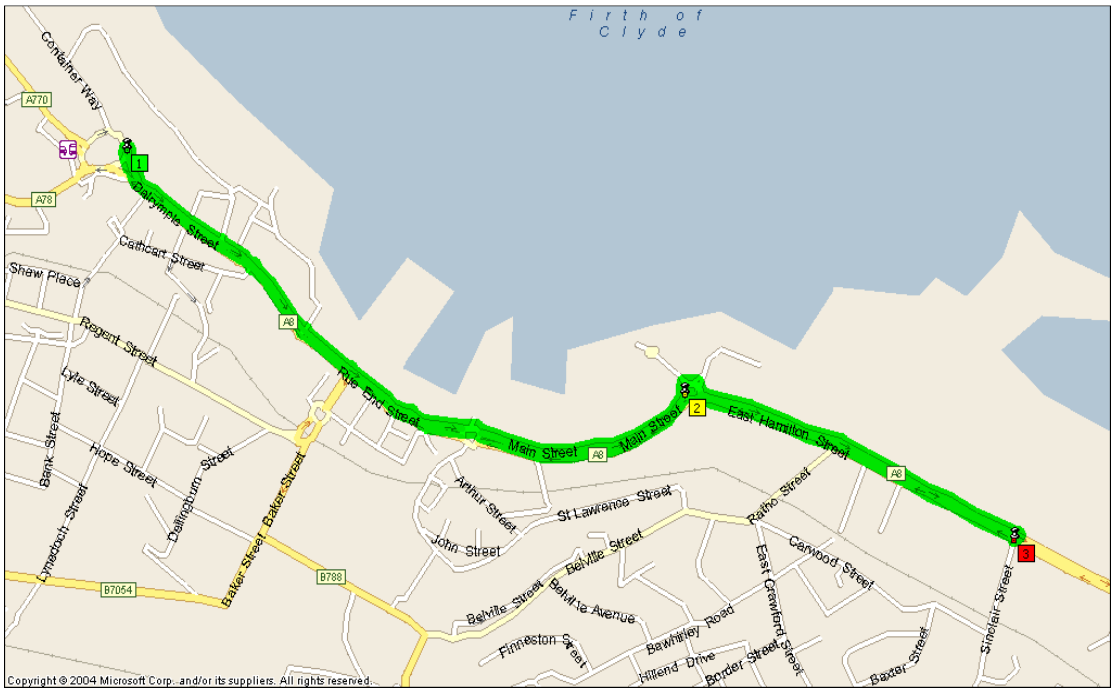


A76 Kirkconnel Cat B Footways

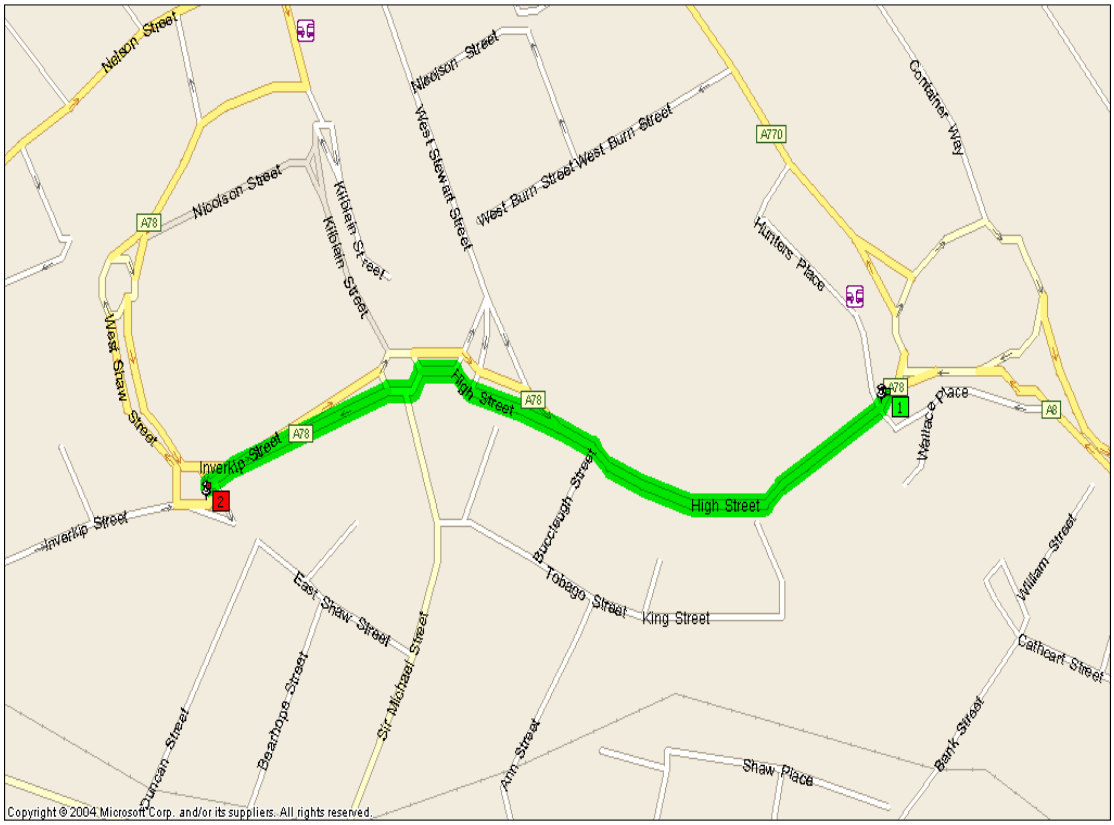
A76 Kirkconnel Cat D Footways



A76 Kirkconnel Cat D Footways



A8 Greenock Cat B Footways



A78 Greenock Cat B Footways

Appendix 9

Freezing Rain Guidelines

Background

Freezing rain in this country is a rare but an exceptionally dangerous condition. It occurs when rain falls through a layer of cold air near to the surface. The precipitation can begin as either rain and/or snow but becomes rain when it passes through a warm layer. The rain then enters a very cold layer of air close to the surface. It does not freeze immediately but forms 'black ice' on contact with any road surfaces that are below freezing temperature.

Guidance on dealing with 'Freezing Rain'

This advice has been prepared to assist service providers in developing procedures for taking the necessary actions both in advance of and during an occurrence of freezing rain. The advice is not intended to prescriptively define how freezing rain should be dealt with, as this is an issue for the individual service provider and is dependent on local circumstances.

It is recognised that the prediction of freezing rain is difficult and the action necessary to deal with it is problematic but service providers need to consider and plan actions to be taken when such events occur. It is important that all details of the actions intended for dealing with the phenomenon of freezing rain are documented in Winter Service Plans.

Considering the limits in the effectiveness of treatments in dealing with freezing rain it is essential that all practical measures be implemented to provide warning to road users of the hazardous conditions.

Measures for dealing with freezing rain fall into three main areas: advance planning, operational arrangements, and hazard mitigation. These measures are considered in further detail as follows:

Advance Planning

Advance planning includes consideration of the potential impact of freezing rain and development of contingency arrangements to mitigate the effects. These contingency arrangements should be documented in the Winter Service Plan. Other aspects of advance planning include training and exercises.

Specific measures that should be considered include:

1. Prior to the commencement of the winter season, agreement should be reached with the local police authorities and, where applicable, the Regional Control Centres (RCCs) on procedures for dealing with occurrences of freezing rain and any incidents that may occur during or following such conditions.

2. Outline operational arrangements should be developed and documented within the Winter Service Plan. Although the adverse effects of freezing rain can impact across any part of the network particular consideration should be given to those parts where the impact may be more significant such as on gradients or difficult alignments.

Operational Arrangements

Operational arrangements should include details of treatment regimes. In general, freezing rain should be treated in a similar manner to snow, i.e. treatment in advance of and during the event and then treatment following as required.

Specific measures that should be considered include:

1. If the condition of freezing rain is anticipated contact with the Police, adjoining service providers and Local Authorities is to be made to acquaint them of the possibility and the proposed action.

2. Prior to the arrival of the freezing rain a pre-treatment is to be made in the same manner as would be made prior to snow falling.

3. Constant monitoring of the situation is to be made and an additional treatment is to be carried out immediately the rain commences and continued until such time that the rain has ceased or the temperature of the road has risen above freezing.

4. Freezing rain usually occurs along the line of an incoming warm front. If possible, to ensure maximum effectiveness of the salt, the advance treatment should be made in the same direction and immediately in advance of the weather front. Use should be made of weather radar where available, to help determine the timing of treatment. Consideration should be given to stationing vehicles at the point on the route where the weather front will first hit in order that timely treatments can be undertaken.

5. Some salt will inevitably be lost during and following treatment and therefore careful consideration needs to be given to the requirement for continued successive treatments.

Hazard Mitigation

The very nature of freezing rain means that treatments will have virtually no effect initially and ice will form on the carriageway. Mitigation of the hazard is therefore a significant aspect of the actions taken in response to freezing rain. The main action is to inform road users of the hazard but more pro-active measures might be required. For example, consideration should be given to closing the road as the rain arrives and holding the traffic (rather than diverting) until such times as it is deemed safe to proceed. Such considerations will need to be made on a local basis taking into account local circumstances.

Specific measures that should be considered include:

1. Where available fixed or mobile Variable Message Signs should be used to warn road users of the hazard. The existing established procedures for requesting VMS settings to be made should be followed well in advance. The following legend is currently the most appropriate for use in these circumstances:

SKID RISK SLOW DOWN

2. Transport Scotland Press officer should be contacted in order that the local media can be advised as necessary.

3. Where available, use of variable mandatory speed limits should be considered. This will require arrangements and protocols to be established with the appropriate Police Control Office (PCO) as part of the advance planning procedures.

4. Consideration should be given to the use of rolling blocks and convoy arrangements to either hold or slow traffic down both just prior to and during the event. This will require arrangements and protocols to be established with the appropriate police authorities as part of the advance planning procedures

In addition to the arrangements made in respect of advance planning, operational procedures and hazard mitigation it will be necessary to consider the arrangements to be implemented should any incidents occur as a result of the freezing rain. This may, for example, include liaison with PCOs to provide advance warning to recovery companies. Procedures for giving such advance warning would need to be established in advance with PCOs documented within the Winter Service Plan.

Appendix 11

Areas Requiring Special Attention Mitigation Plans

AREAS REQUIRING SPECIAL ATTENTION SCHEDULE	
Reference Number: ARSA/SW/01–A75 Glen Luce	
Location	A75 Glen Luce Bypass
Grid Reference	221147, 557495 to 229339, 561155
Problem	6 mile length of carriageway with a mixture of severe bends and steep gradients of X%
Has this site experienced problems before or is it an identified risk?	HGV's lost traction and became stranded during winter 2010/11, closing the A75 for short periods
Detailed Mitigation Measures	
	Significant Snow fall
Optional Mitigation Primary Measure	Application of 40g of Salt Treatment Application of Alternative De-icer or Brine Solution Additional ploughing vehicles may be utilised, dependant on conditions across the rest of the south west unit. Resource would be sought from, in order of preference, Stranraer, Castle Douglas, and Wayside Depots Representative deployed to MART Use could be made of Weather station camera which is situated at Drumflower, which is further west on A75 to monitor conditions
When enacted	The measures detailed above will be in place prior to the event based on a forecast of significant snow fall in a short space of time with a high degree of forecaster confidence and confirmed by telephone with the duty Forecaster and Winter Service Duty officer. In cases of low or medium forecaster confidence dialogue will be opened with Transport Scotland regarding extent of mitigation measures.
Who enacts	Winter Service Duty Officer
Who will manage the response	Winter Service Duty Officer supported by Depot Duty Supervisor
Are diversion routes to be used?	Diversion route would be on local authority routes and would be dependent on the condition at that time.
Deployment of resources	1 No 7.5T vehicle with driver and second man loaded with salt to assist HGV's up slope 1 Plough/Spreader (Stranraer)
Use of VMS	Notification of the Closure will be made using VMS at the following locations (subject to availability): A75 westbound at Collin A701 southbound at Dumfries A75 Eastbound at Castle Kennedy
Other measures put in place	This road is on a CAT B patrol route and if required this vehicle can be utilised to patrol this particular section of the road as identified above.
Assistance from OC resources	The use of additional plant, from Stranraer depot, would be examined, as a reactionary measure, to assist in the clearance of snow.
Assistance from additional Transport Scotland resources	Assistance from Transport Scotland Communications to put message out to media.
Assistance from External Sources	Assistance from Police to close road to allow snow removal. Local contractors used to excavate snow Tractor and plough, J Findlay Kirkcudbright. 2 No Tippers Ian Watt Haulage, New Cumnock
AREAS REQUIRING SPECIAL ATTENTION SCHEDULE	

Reference Number: ARSA/SW/02 –A76 Auchinleck to Kirkconnel	
Location	A76 from Skerrington roundabout at Auchinleck to A76 Guildhall bridge Kirkconnel
Grid Reference	(254554, 621530) to (272141, 612320)
Problem	23 Km length of carriageway with a mixture of severe bends and steep gradients of X%
Has this site experienced problems before or is it an identified risk?	HGV's lost traction and became stranded during winter 2010/11, closing the A76 for short periods
Detailed Mitigation Measures	
	Significant Snow fall
Optional Mitigation Primary Measure	Application of 40g of Salt Treatment Application of Alternative De-icer or Brine Solution This route is a Cat B patrol route and this vehicle could be utilised to concentrate on this section Additional ploughing vehicles may be utilised, dependant on conditions across the rest of the south west unit. Resource would be sought from, in order of preference, Ayr, Wayside and Polmadie Depots Representative deployed to MART Use would be made of Weather station camera which is situated at Blackwood farm, south of New Cumnock, to monitor conditions
When enacted	The measures detailed above will be in place prior to the event based on a forecast of significant snow fall in a short space of time with a high degree of forecaster confidence and confirmed by telephone with the duty Forecaster and Winter Service Duty officer. In cases of low or medium forecaster confidence dialogue will be opened with Transport Scotland regarding extent of mitigation measures.
Who enacts	Winter Service Duty Officer
Who will manage the response	Winter Service Duty Officer supported by Depot Duty Supervisor
Are diversion routes to be used?	A localised diversion is not considered viable as alternative route is over higher ground and unsuitable for HGV's. A76 traffic would require to be diverted on M74 at Gretna and advised to use M74 to Glasgow and then M77 south, as required.
Deployment of resources	1 No 7.5T vehicle with driver and second man loaded with salt to assist HGV's up slope 1 Plough/Spreader (Ayr or Wayside) 1 Patrol Vehicle (Ayr)
Use of VMS	Notification of the Closure will be made using VMS at the following locations (subject to availability): M77 southbound 1/2 mile north of Junction 5 Maidenhill M6 / M74 northbound, 1 mile south of Gretna
Other measures put in place	This road is on a CAT B patrol route and if required this vehicle can be utilised to patrol this particular section of the route as identified above.
Assistance from OC resources	The use of additional plant from Ayr depot, would be examined, as a reactionary measure, to assist in the clearance of snow.
Assistance from additional Transport Scotland resources	Assistance from Transport Scotland Communications to put message out to media.
Assistance from External Sources	Assistance from Police to close road to allow snow removal. Local contractors used to excavate snow 1 JCB R S Duncan Plant, New Cumnock 2 No Tippers Ian Watt Haulage, New Cumnock
AREAS REQUIRING SPECIAL ATTENTION SCHEDULE	

Reference Number: ARSA/SW/04 –A737 Risk Brae	
Location	A737 Risk Brae from Howwood to Roadhead roundabout
Grid Reference	238917, 659985 to 236644, 657765
Problem	2.5 mile length of carriageway with a gradient of X%
Has this site experienced problems before or is it an identified risk?	HGV's lost traction and became stranded during winter 2010/11, closing the A737 north and southbound
Detailed Mitigation Measures	
	Significant Snow fall
Optional Mitigation Primary Measure	Application of 40g of Salt Treatment Application of Alternative De-icer or Brine Solution A patrol vehicle could be pre-deployed to focus on monitoring A737, as identified in other measures below. Additional ploughing vehicles may be utilised, dependant on conditions across the rest of the south west unit. Resource would be sought from, in order of preference, Polmadie, Ayr Depots Representative deployed to MART Use would be made of Traffic Scotland's Cameras and the weather station at Highfield which are situated closest to this location to monitor conditions
When enacted	The measures detailed above will be in place prior to the event based on a forecast of significant snow fall in a short space of time with a high degree of forecaster confidence and confirmed by telephone with the duty Forecaster and Winter Service Duty officer. In cases of low or medium forecaster confidence dialogue will be opened with Transport Scotland regarding extent of mitigation measures.
Who enacts	Winter Service Duty Officer
Who will manage the response	Winter Service Duty Officer supported by Depot Duty Supervisor
Are diversion routes to be used?	Diversion route would be on local authority routes and would be dependent on their condition.
Deployment of resources	1 Plough/Spreader (Polmadie) 1 Patrol Vehicle (Polmadie)
Use of VMS	Notification of the Closure will be made using VMS at the following locations (subject to availability): M8 westbound between junction 27 and 29 for southbound A737 traffic. Nothing suitable for northbound traffic. Gantries could also be used for southbound A737 traffic.
Other measures put in place	This road is on a CAT B patrol route and if required this vehicle can be utilised to patrol this particular section of the route as identified above.
Assistance from OC resources	The use of additional plant, from Polmadie depot, would be examined, as a reactionary measure, to assist in the clearance of snow.
Assistance from additional Transport Scotland resources	Assistance from Transport Scotland Communications to put message out to media.
Assistance from External Sources	Assistance from Police to close road to allow snow removal. Local contractors used to excavate snow 1 JCB Wm. Hamilton Contractors (Larkhall) 3 No Tippers, Aggregate Industries, Harthill
AREAS REQUIRING SPECIAL ATTENTION SCHEDULE	
Reference Number: ARSA/SW/05 –A75 Glen	

Location	A75 The Glen to west of Dumfries
Grid Reference	294337, 575325 to 290289, 574815
Problem	2.6 mile length of carriageway with a mixture of severe bends and steep gradients of X%
Has this site experienced problems before or is it an identified risk?	HGV's lost traction and became stranded during winter 2010/11, closing the A75 for short periods
Detailed Mitigation Measures	
	Significant Snow fall
Optional Mitigation Primary Measure	Application of 40g of Salt Treatment Application of Alternative De-icer or Brine Solution Additional ploughing vehicles may be utilised, dependant on conditions across the rest of the south west unit. Resource would be sought from, in order of preference, Wayside, Castle Douglas and Stranraer Depots Representative deployed to MART Use could be made of Weather station camera which is situated at Crocketford, which is further west on A75 to monitor conditions
When enacted	The measures detailed above will be in place prior to the event based on a forecast of significant snow fall in a short space of time with a high degree of forecaster confidence and confirmed by telephone with the duty Forecaster and Winter Service Duty officer. In cases of low or medium forecaster confidence dialogue will be opened with Transport Scotland regarding extent of mitigation measures.
Who enacts	Winter Service Duty Officer
Who will manage the response	Winter Service Duty Officer supported by Depot Duty Supervisor
Are diversion routes to be used?	Diversion route would be on local authority routes and would be dependent on the condition at that time.
Deployment of resources	1 No 7.5T vehicle with driver and second man loaded with salt to assist HGV's up slope 1 Plough/Spreader (Wayside)
Use of VMS	Notification of the Closure will be made using VMS at the following locations (subject to availability): A75 westbound at Collin A701 southbound at Dumfries A75 Eastbound at Newton Stewart
Other measures put in place	This road is not on any patrol route so would require a specific vehicle to be added to patrol should it be required.
Assistance from OC resources	The use of additional plant, from Wayside depot, would be examined, as a reactionary measure, to assist in the clearance of snow.
Assistance from additional Transport Scotland resources	Assistance from Transport Scotland Communications to put message out to media.
Assistance from External Sources	Assistance from Police to close road to allow snow removal. Local contractors used to excavate snow Tractor and plough, J Findlay Kirkcudbright. 2 No Tippers Ian Watt Haulage, New Cumnock
AREAS REQUIRING SPECIAL ATTENTION SCHEDULE	
Reference Number: ARSA/SW/06 –M74 Junction 10 to 12	
Location	M74 from junction 10 to junction 12

Grid Reference	282365, 639484 to 285847, 632564
Problem	6.0 mile length of carriageway with a gradient of X%
Has this site experienced problems before or is it an identified risk?	HGV's lost traction and became stranded during winter 2010/11, closing the M74 southbound
Detailed Mitigation Measures	
	Significant Snow fall
Optional Mitigation Primary Measure	Application of 40g of Salt Treatment Application of Alternative De-icer or Brine Solution A patrol vehicle could be pre-deployed to focus on monitoring M74, as identified in other measures below. Additional ploughing vehicles may be utilised, dependant on conditions across the rest of the south west unit. Resource would be sought from, in order of preference, Polmadie, Lockerbie, and Polmadie Depots Representative deployed to MART Use would be made of Traffic Scotland's Cameras and the weather station at Millbank which are situated at this location to monitor conditions
When enacted	The measures detailed above will be in place prior to the event based on a forecast of significant snow fall in a short space of time with a high degree of forecaster confidence and confirmed by telephone with the duty Forecaster and Winter Service Duty officer. In cases of low or medium forecaster confidence dialogue will be opened with Transport Scotland regarding extent of mitigation measures.
Who enacts	Winter Service Duty Officer
Who will manage the response	Winter Service Duty Officer supported by Depot Duty Supervisor
Are diversion routes to be used?	Diversion route would be on local authority routes and would be dependent on their condition.
Deployment of resources	1 Plough/Spreader (Polmadie) 1 Patrol Vehicle (Polmadie)
Use of VMS	Notification of the Closure will be made using VMS at the following locations (subject to availability): M74 southbound at junction 8 M74 northbound between jct 13 to 12 VMS could also be used at border with M6 utilising A75 and A76 or A702 or A7 routes as diversions.
Other measures put in place	This road is on a CAT A patrol route and if required this vehicle can be utilised to patrol this particular section of the route as identified above.
Assistance from OC resources	The use of additional plant, from Polmadie depot, would be examined, as a reactionary measure, to assist in the clearance of snow.
Assistance from additional Transport Scotland resources	Assistance from Transport Scotland Communications to put message out to media.
Assistance from External Sources	Assistance from Police to close road to allow snow removal. Local contractors used to excavate snow 1 JCB Wm. Hamilton Contractors (Larkhall) 3 No Tippers, Aggregate Industries, Harthill

AREAS REQUIRING SPECIAL ATTENTION SCHEDULE
Reference Number: ARSA/SW/07 –M77

Location	M77 Junction 3 to junction 4 southbound
Grid Reference	253674, 658693
Problem	1 mile length of motorway with a gradient of X%
Has this site experienced problems before or is it an identified risk?	HGV's lost traction and became stranded during winter 2010/11, closing the M77 southbound
Detailed Mitigation Measures	
	Significant Snow fall
Optional Mitigation Primary Measure	Application of 40g of Salt Treatment Application of Alternative De-icer or Brine Solution A patrol vehicle could be pre-deployed to focus on monitoring M77, as identified in other measures below. Additional ploughing vehicles may be utilised, dependant on conditions across the rest of the south west unit. Resource would be sought from, in order of preference, Polmadie, Ayr Depots Representative deployed to MART Use would be made of Traffic Scotland's Cameras which are situated at this location to monitor conditions
When enacted	The measures detailed above will be in place prior to the event based on a forecast of significant snow fall in a short space of time with a high degree of forecaster confidence and confirmed by telephone with the duty Forecaster and Winter Service Duty Officer. In cases of low or medium forecaster confidence dialogue will be opened with Transport Scotland regarding extent of mitigation measures.
Who enacts	Winter Service Duty Officer
Who will manage the response	Winter Service Duty Officer supported by Depot Duty Supervisor
Are diversion routes to be used?	Diversion route would be on local authority routes and would be dependent on their condition. A727 to Eastwood Toll and A77 south to M77 at Maidenhill.
Deployment of resources	1 Plough/Spreader (Polmadie) 1 Patrol Vehicle (Polmadie)
Use of VMS	Notification of the Closure will be made using VMS at the following locations (subject to availability): M77 southbound between M8 and junction 3 (2 No available) Gantries could also be used.
Other measures put in place	This road is on a CAT A patrol route and if required this vehicle can be utilised to patrol this particular section of the route as identified above.
Assistance from OC resources	The use of additional plant, from Polmadie depot, would be examined, as a reactionary measure, to assist in the clearance of snow.
Assistance from additional Transport Scotland resources	Assistance from Transport Scotland Communications to put message out to media.
Assistance from External Sources	Assistance from Police to close road to allow snow removal. Local contractors used to excavate snow 1 JCB Wm. Hamilton Contractors (Larkhall) 3 No Tippers, Aggregate Industries, Harthill

AREAS REQUIRING SPECIAL ATTENTION SCHEDULE

Reference Number: ARSA/SW/08 – M8	
Location	M8 Charing Cross Underpass
Grid Reference	257955,665984 and 257996,666126
Problem	Falling icicles from underpass soffit onto M8 motorway
Has this site experienced problems before or is it an identified risk?	Formation of icicles on underpass soffit in winter 2016/17 and 2017/18
Detailed Mitigation Measures	
	Icicle Formation
Optional Mitigation Primary Measure	Treatment of the overbridge is the responsibility of Glasgow City Council. Application of 40g of salt on M8 through the underpass to address water seeping through the soffit. Deployment of a patrol vehicle to monitor M8 Charing Cross Underpass, in conjuction with the front line spreader for that route. Additional ploughing vehicles from Polmadie Depot may be utilised, dependant on conditions across the rest of the South West Unit. Where icicles are observed to be of sufficient size to be clearly visible and a potential danger to road users (estimated as 150mm), a MEWP will be deployed and the icicles removed from the soffit manually. Representative deployed to MART. Use would be made of Traffic Scotland's Cameras which are situated at this location to monitor conditions.
When enacted	The measures detailed above will be in place prior to the event based on a forecast of a prolonged period of ice formation with a high degree of forecaster confidence and confirmed by telephone with the d Duty Forecaster and Winter Service Duty Officer. In cases of low or medium forecaster confidence dialogue will be opened with Transport Scotland regarding extent of mitigation measures.
Who enacts	Winter Service Duty Officer.
Who will manage the response	Winter Service Duty Officer supported by Duty Supervisor.
Are diversion routes to be used?	Diversion routes would not be implemented if a rolling road block can be implemented, as this would take longer to effect than clearance of the icicles. If a rolling road block cannot be implemented, motorway closure and implementation of Standard incident Diversion Route will be required.
Deployment of resources	2 No. Plough/Spreaders (Polmadie) 1 No. 14metre MEWP (Polmadie)
Use of VMS	Notification of the closure will be made using overhead gantries on both approaches to the underpass.
Other measures put in place	This road is on a CAT A patrol route and this vehicle can be utilised to patrol this particular section of the route.
Assistance from OC resources	The use of a MEWP, from Polmadie depot, would be requested, as a reactionary measure, to assist in the clearance of icicles.
Assistance from additional Transport Scotland resources	Assistance from Transport Scotland Communications to put message out to media.
Assistance from External Sources	Assistance from Police to provide rolling road block where possible, to allow icicle removal.

Appendix 12

Potassium Acetate Locations

ANNEX 7.2/I – Potassium Acetate Treatment

Potassium acetate treatment will be applied at the location specified in Table 7.2.I.1 including those parts of the Trunk Road 200 metres in advance of the limits of each bridge.

Road Number	Location
M8	Kingston Bridge Complex (including some 4.5 kilometres of approach viaduct and on- and off-ramps)
M8	Whitecart Viaduct
M8	St James Interchange
A898	Erskine Bridge Complex (including approach Structures)
A725 Footbridge	Kingsway, East Kilbride
A726 Footbridge	Queensway, East Kilbride
A77	Hansel Bridge footbridge

Table 7.2.I.1