

Scottish Trunk Road Network Management Contract

Schedule 2 - Scope - Appendix 6 Winter Service

Attachments

North West Unit

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Attachment 6.1 Appendices for Winter Service Plan

Table 6.1.1 – Winter Service Patrol Record

Winter Service Patrol start and end time	Weather conditions for Winter		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 (°C)	Road Surface temperature (°C)	Snow	Icy	Wet	Dry	High	Medium	Low	Action code	Treatment Type	Spread rate (g/m ²)	Approximate location of salting or other action	Start Time	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

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Table 6.1.2 - Precautionary Treatment Routes determined by the Operating Company 2 Carriageway Route, 1 Footpath route

Table 6.1.2a – Precautionary Treatment Routes determined by the Operating Company: Carriageway Routes

Route No.	Depot	Description	Depot to Route (km)	Time to Route (mins)	Total Route Length (km)	De-icing Length (km)	Salting Length (km)	Average Speed (km/hr)	Route Time (mins)	Route to Depot (km)	Route Efficiency	Alternative Access	Average Width of Route	Route Tonnage @20g/m2	Route Tonnage at 40 g/sq m pre-wet (tonne)	Treatment type
NW40P H01	Perth	A9 & A95	2	4	61.9	59.8	59.8	55	56	62	47.50	Killin	6.5		15.54	Pre-wet salt
NW40P H02	Perth	A9	11	10	95	52	52	55	103	1	48.60	Ballinluig	7.5		15.6	Pre-wet salt
NW40B G01	Ballinluig	A9	1	1	79	52	52	50	94	1	64.20	Kingussie	7.5		15.6	Pre-wet salt
NW40K G01	Kingussie	A9	1	2	74.4	52.8	52.8	50	84	12.5	60.07	Ballinluig	7.5		15.84	Pre-wet salt
NW40K G02	Kingussie	A9	2	3	81.3	58	58	55	109	3	65.91	Inverness	7		15.68	Pre-wet salt
NW40K G03	Kingussie	A889 & A86	1	1.5	56.3	32	32	50	37.5	25.5	38.65	Kingussie	6		7.68	Pre-wet salt
NW40K G04	Kingussie	A86	18	22.5	45.5	45.5	45.5	50	55	64	35.69	Fort William	6		10.92	Pre-wet salt
NW40I N01	Inverness	A9	1	2	53	42	42	50	98.5	28	51.22	Kingussie	7.5		12.6	Pre-wet salt
NW40I N02	Inverness	A82	3	5	55	55	55	50	66	55	48.67	Fort William	6.4		14.08	Pre-wet salt
NW40I N03	Inverness	A9 & A835	1	2	59	48	46.48	50	96	1	78.69	Ullapool	7		13.44	Pre-wet salt And Potassium Acetate
NW40I N04	Inverness	A835	28	30	59	59	59	50	70.8	89	33.52	Ullapool	6.5		15.34	Pre-wet salt
NW40I N05	Inverness	A9	22	24	56.4	54	54	50	64	87	32.65	Dunbeath	6.5		14.04	Pre-wet salt And Potassium Acetate
NW40D B01	Dunbeath	A9	9	10	49	49	49	50	58	58	42.24	Thurso	6		11.76	Pre-wet salt
NW40D B02	Dunbeath	A9 & A99	9	10	42	42	42	50	50	39	46.67	Thurso	6.4		10.75	Pre-wet salt

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NW40D B03	Dunbeath	A9	6	8	41	41	41	50	50	47	43.62	Thurso	6.3		10.66	Pre-wet salt
NW40A D01	Ardelve	A87	38	41	54	54	53.11	50	61	92	29.35	Portree	6		12.96	Pre-wet salt
NW40A D02	Ardelve	A87	22	26	61.6	61.6	61.1	50	72	39	50.24	Portree	6		14.4	Pre-wet salt And Potassium Acetate
NW40A D03	Ardelve	A87, A887 & A82	22	26	70	60	60	50	83	67	37.74	Fort William	6		14.4	Pre-wet salt
NW40C P01	Corpach	A830, A82 & A87	1	2	63	63	63	50	76	64	49.22	Ardelve	6		15.12	Pre-wet salt
NW40C P02	Corpach	A830	1	2	62	62	62	50	74	63	49.21	Mallaig	6.2		15.6	Pre-wet salt
NW40C P03	Corpach	A82	28	35	54	54	54	50	64	80	33.33	Killin	6.2		13.39	Pre-wet salt
NW40O B01	Oban	A828 & A82	10	12	68.5	66	66	50	72	75	43.00	Corpach	6		15.76	Pre-wet salt
NW40O B02	Oban	A85	1	2	58.3	58	58	50	75	61	48.21	Killin	6.2		14.38	Pre-wet salt
NW40K L01	Killin	A85 & A82	22	27	43	43	43	44	57	30	45.26	Oban	6.3		10.83	Pre-wet salt
NW40K L02	Killin	A84	11	17	44	44	44	50	53	55	40.00	Perth	6.3		11.08	Pre-wet salt
NW40K L03	Killin	A82 & A83	23	28	40	40	40	45	53	63	31.75	Inveraray	6.5		10.4	Pre-wet salt
NW40I V01	Inveraray	A83 & A82	6	8	105	58	58	50	106	56	34.73	Killin	6.3		14.61	Pre-wet salt
NW40I V02	Inveraray	A83	6	8	63	63	63	50	76	69	45.65	Machrihanish	6		15.12	Pre-wet salt
NW40M H01	Machrihanish	A83	7	9	60.6	57.6	57.6	50	76	50	48.98	Inveraray	6.2		14.28	Pre-wet salt

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Table 6.1.2b – Precautionary Treatment Routes determined by the Operating Company: Footway Routes

Route No.	Depot	Description	Depot to Route (km)	Time to Route (mins)	Total Route Length (km)	De-icing Length (km)	Salting Length (km)	Average Speed (km/hr)	Route Time (mins)	Route to Depot (km)	Route Efficiency	Alternative Access	Average Width of Route	Route Coverage at 0.0156 l/m ² (litres)	Route Coverage at 0.0312 l/m ² (litres)	Treatment type
NWFW01	Dunbeath	A99 Lybster/ Wick A9 Thurso/ Scrabster/ Helmsdale/ Portgower Dunbeath/	12.4	11	N/A	6.0	N/A	N/A	N/A	26.8	N/A	Golspie	1.8	217	434	Brine
NWFW02	Golspie	A9 Golspie/ Brora	1.0	2	N/A	4.4	N/A	N/A	N/A	10.9	N/A	Dunbeath	1.8	160	320	Brine
NWFW03	Inverness	A82 Fort Augustus/ Invermoriston / Drumnadrochit/Invernes s/ A835 Contin/ Garve/ Ullapool	3.0	5	N/A	15.9	N/A	N/A	N/A	90.0	N/A	Kingussie	1.8	571	1142	Brine
NWFW04	Kingussie	A86 Kingussie/ Newtonmore A889 Dalwhinnie	2.0	4	N/A	3.9	N/A	N/A	N/A	25.0	N/A	Ballinluig	1.8	140	280	Brine
NWFW05	Ardelve	A87 Broadford/ Kyle of Lochalsh/ Balmacara/ Inverinate	7.0	9	N/A	6.6	N/A	N/A	N/A	7.0	N/A	Portree	1.8	237	474	Brine
NWFW06	Portree	A87 Uig/ Kensaleyre/ Portree	2.0	4	N/A	5.6	N/A	N/A	N/A	25.0	N/A	Ardelve	1.8	200	400	Brine
NWFW07	Oban	A828 Connel/ Appin/ Benderloch & Ledaig A85 Oban/ Taynult/ Lochawe/ Dalmally/	4.0	7	N/A	11.0	N/A	N/A	N/A	39.8	N/A	Killin	1.8	395	790	Brine
NWFW08	Corpach	A830 Corpach/ Mallaig/ Arisaig/ Fort William A82 Onich/ Fort William/ Spean Bridge A86 Spean Bridge/ A87 Invergarry	3.0	5	N/A	18.3	N/A	N/A	N/A	24.0	N/A	Killin	1.8	657	1314	Brine
NWFW09	Inveraray	A83 Inveraray/ Tarbert/ Ardrishaig/ Lochgilphead/ Minard/ Furnace/ Arrochar & Succoth/ Tarbet	1.0	2	N/A	12.2	N/A	N/A	N/A	39.5	N/A	Machrahanish	1.8	440	880	Brine
NWFW10	Killin	A82 Crianlarich/ Tyndrum/ A84 Doune/ Burn of Cambus/ Callander/ Kilmahog/ Strathyre/ Lochearnhead/ A85 Lochearnhead/ St Fillans	29.9	30	N/A	9.9	N/A	N/A	N/A	23.6	N/A	Perth	1.8	355	710	Brine

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NWFW11	Perth	A85 Perth & Huntingtower/ Methven/ Gilmerton/ Crieff/ Comrie	3.0	5	N/A	7.3	N/A	N/A	N/A	38.0	N/A	Killin	1.8	263	526	Brine
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Note – All Routes Must Be Capable of Being of Being Provided Up To 40 G/M2

Route efficiency is calculated as per the example below:

Route Efficiency Calculation

Route efficiency in tables in attachment 6.1.2 is calculated as per the below:

- **A** = Distance from 1. depot to 2. start of route (km) - (i.e dead time)
- **B** = Distance from 2. start of route to 3. end of route (km) – (i.e including any dead time from start to end of route for junctions etc hence optimisation)
- **C** = Total Distance treated from 2. start of route to 3. end of route (km)
- **D** = Distance from 3. end of route to 1. depot
- **C = 100 / (A + B + D) x C**

Example:

Route	Depot	Description	Depot to Route (km) A	Time to Route (mins) B	Total route length (km) B	Total route length treated (km) C	Average Speed (km/hr)	Route Time (mins)	Route to Depot (km) D	Route efficiency $100 / (A + B + D) \times C$	Average Width of Route (m)	Alternative Access	Route Tonnage at 20 g/sq m (tonne)	Route Tonnage at 40 g/sq m pre-wet (tonne)	Treatment Type
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1-20	Hawick (SBC)	A7 Hawick - Selkirk, Hawick A7 Hawick - National Boundary	1.8	2.5	67.5	60	48	110	62.6	45%	7.7	Eaglesfield	7.28	Pre-wet	1-20
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Table 6.1.3 Ploughing Routes Determined by Operating Company

Route No.	Depot	Description	Depot to Route (km)	Time to Route (mins)	Salting Length (km)	Aver Speed (km/hr)	Route Time (mins)	Route to Depot (km)	Alternative Access	Average Width of Route	Comments
NWPR PH01	Perth	A9 & A95	2	4	59.8	55	56	62	Killin	6.5	
NWPR PH02	Perth	A9	11	10	52.0	55	103	1	Ballinluig	7.5	
NWPR BG01	Ballinluig	A9	1	1	52.0	50	94	1	Kingussie	7.5	
NWPR KG01	Kingussie	A9	1	2	52.8	50	84	12.5	Ballinluig	7.5	
NWPR KG02	Kingussie	A9	2	3	58.8	55	109	3	Inverness	7.0	
NWPR KG03	Kingussie	A889 & A86	1	1.5	32.0	50	37.5	25.5	Kingussie	6.0	
NWPR KG04	Kingussie	A86	18	22.5	45.5	50	55	64	Fort William	6.0	
NWPR IN01	Inverness	A9	1	2	42.0	50	98.5	28	Kingussie	7.5	
NWPR IN02	Inverness	A82	3	5	55.0	50	66	55	Fort William	6.4	
NWPR IN03	Inverness	A9 & A835	1	2	46.5	50	96	1	Ullapool	7.0	Pre-wet salt And Potassium Acetate
NWPR IN04	Inverness	A835	28	30	59.0	50	70.8	89	Ullapool	6.5	
NWPR IN05	Inverness	A9	22	24	54.0	50	64	87	Dunbeath	6.5	Pre-wet salt And Potassium Acetate
NWPR DB01	Dunbeath	A9	9	10	49.0	50	58	58	Thurso	6.0	
NWPR DB02	Dunbeath	A9 & A99	9	10	42.0	50	50	39	Thurso	6.4	
NWPR DB03	Dunbeath	A9	6	8	41.0	50	50	47	Thurso	6.3	
NWPR	Ardelve	A87	38	41	53.1	50	61	92	Portree	6.0	

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AD01											
NWPR AD02	Ardelve	A87	22	26	61.1	50	72	39	Portree	6.0	Pre-wet salt And Potassium Acetate
NWPR AD03	Ardelve	A87, A887 & A82	22	26	60.0	50	83	67	Fort William	6.0	
NWPR CP01	Corpach	A830, A82 & A87	1	2	63.0	50	76	64	Ardelve	6.0	
NWPR CP02	Corpach	A830	1	2	62.0	50	74	63	Mallaig	6.2	
NWPR CP03	Corpach	A82	28	35	54.0	50	64	80	Killin	6.2	
NWPR OB01	Oban	A828 & A82	10	12	66.0	50	72	75	Corpach	6.0	
NWPR OB02	Oban	A85	1	2	58.0	50	75	61	Killin	6.2	
NWPR KL01	Killin	A85 & A82	22	27	43.0	44	57	30	Oban	6.3	
NWPR KL02	Killin	A84	11	17	44.0	50	53	55	Perth	6.3	
NWPR KL03	Killin	A82 & A83	23	28	40.0	45	53	63	Inveraray	6.5	
NWPR IV01	Inveraray	A83 & A82	6	8	58.0	50	106	56	Killin	6.3	
NWPR IV02	Inveraray	A83	6	8	63.0	50	76	69	Machriha nish	6.0	
NWPR MH01	Machriha nish	A83	7	9	57.6	50	76	50	Inveraray	6.2	

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Table 6.1.4a Operational Salt Stock Levels

De-icing Material (i.e. Dry salt / ABP)	Location	Structure Type	Min (tonnes) 1st Oct
Dry Salt			35,000T
Dry Salt	Dunbeath	Covered Structure	3000 T
Dry Salt	Golspie	Covered Structure	1000 T
Dry Salt	Inverness	Covered Structure	7000 T
Dry Salt	Kingussie	Covered Structure	5000 T
Dry Salt	Ardelve	Covered Structure	2500 T
Dry Salt	Corpach	Covered Structure	3000 T
Dry Salt	Ballachulish	Covered Structure	600 T
Dry Salt	Oban	Covered Structure	1600 T
Dry Salt	Inveraray	Covered Structure	2000 T
Dry Salt	Machrahanish	Covered Structure	2000 T
Dry Salt	Killin	Covered Structure	2600 T
Dry Salt	Perth	Covered Structure	4500 T
Dry Salt	Ballinluig	Covered Structure	600 T
Marine Salt	Dunbeath	Covered Structure	30 T
Marine Salt	Golspie	Covered Structure	30 T
Marine Salt	Inverness	Covered Structure	60 T
Marine Salt	Kingussie	Covered Structure	60 T
Marine Salt	Portree	Covered Structure	30 T
Marine Salt	Ardelve	Covered Structure	30 T
Marine Salt	Corpach	Covered Structure	60 T
Marine Salt	Oban	Covered Structure	30 T
Marine Salt	Inveraray	Covered Structure	30 T
Marine Salt	Machrahanish	Covered Structure	30 T
Marine Salt	Killin	Covered Structure	60 T
Marine Salt	Perth	Covered Structure	60 T
Marine Salt	Ballinluig	Covered Structure	30 T
Potassium Acetate	Inverness	Storage Tank	60000 L
Potassium Acetate	Ardelve	Storage Tank	60000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Dunbeath	Storage Shed	5000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Inverness	Storage Shed	10000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Kingussie	Storage Shed	7000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Ardelve	Storage Shed	5000 L

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Magnesium Chloride or equivalent (Safecote Supamix)	Corpach	Storage Shed	5000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Oban	Storage Shed	3000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Inveraray	Storage Shed	3000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Machrahanish	Storage Shed	2000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Killin	Storage Shed	5000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Perth	Storage Shed	3000 L
Magnesium Chloride or equivalent (Safecote Supamix)	Ballinluig	Storage Shed	2000 L

Table 6.1.4b Brine Production & Storage

Location	Type (Saturator / Storage Only)	Capacity (L)	Min (L)
Dunbeath	Saturator and storage	20,000 and 20,000	16,415
Golspie	Saturator	20,000	8,181
Inverness	Saturator and storage	20,000 and 40,000	43,596
Kingussie	Saturator and storage	20,000 and 40,000	34,203
Portree	Saturator	20,000	23,170
Ardelve	Saturator and storage	20,000 and 20,000	20,000
Corpach	Saturator and storage	20,000 and 40,000	32,454
Oban	Saturator and storage	20,000 and 20,000	13,617
Inveraray	Saturator and storage	20,000 and 20,000	21,798
Machrahanish	Saturator	20,000	10,926
Killin	Saturator and storage	20,000 and 40,000	28,767
Perth	Saturator and storage	20,000 and 40,000	24,543
Ballinluig	Saturator	20,000	8,181

Table 6.1.5 - Winter Service Plant for all Winter Service Patrols

Table deleted – information covered in following tables.

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Table 6.1.6 - Front line Winter Service Plant permanently available and located in the Unit for Winter Service for carriageways

Type of Winter Service Plant & Reg. No.	Depot Location	Vehicle Capacity	Number of Vehicles	Plant Use* (i), (ii) or (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Dunbeath	12m ³ Fixed Body	1	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Inverness	12m ³ Fixed Body	3	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Kingussie	12m ³ Fixed Body	2	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Portree	12m ³ Fixed Body	-	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Ardelve	12m ³ Fixed Body	2	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Corpach	12m ³ Fixed Body	3	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Oban	12m ³ Fixed Body	2	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Inveraray	12m ³ Fixed Body	2	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Machrahanish	12m ³ Fixed Body	1	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Killin	12m ³ Fixed Body	1	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Perth	12m ³ Fixed Body	2	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Ballinluig	12m ³ Fixed Body	1	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Inverness	12m ³ / 1000 litres Fixed Body Combi	2	(i) and (iii)
Front-Line Treatment 4 axles rigid / 32 tonnes / 2 axle drive	Ardelve	12m ³ / 1000 litres Fixed Body Combi	1	(i) and (iii)
Front-Line Treatment 3 axles rigid / 26 Tonnes / 2-axle drive	Dunbeath	9m ³ Fixed Body	2	(i) and (iii)
Front-Line Treatment 3 axles rigid / 26 Tonnes / 2-axle drive	Kingussie	9m ³ Fixed Body	2	(i) and (iii)
Front-Line Treatment 3 axles rigid / 26 Tonnes / 2-axle drive	Killin	9m ³ Fixed Body	2	(i) and (iii)
Winter Service Patrol 3 axles rigid / 26 Tonnes / 2-axle drive	Inverness	6m ³ / 1000 litre Fixed Body Combi	1	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Dunbeath	6m ³ Fixed Body	1	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Golspie	6m ³ Fixed Body	1	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Inverness	6m ³ Fixed Body	2	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Kingussie	6m ³ Fixed Body	2	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Ardelve	6m ³ Fixed Body	1	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Corpach	6m ³ Fixed Body	2	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Oban	6m ³ Fixed Body	1	(ii) and (iii)

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Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Inveraray	6m ³ Fixed Body	2	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Machrahanish	6m ³ Fixed Body	0	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Killin	6m ³ Fixed Body	2	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Perth	6m ³ Fixed Body	2	(ii) and (iii)
Winter Service Patrol 2 axles rigid / 18 Tonnes / 1-axle drive	Ballinluig	6m ³ Fixed Body	1	(ii) and (iii)
Frontline Loading Plant	Dunbeath	5 Tonne	1	(iii)
Frontline Loading Plant	Golspie	5 Tonne	1	(iii)
Frontline Loading Plant	Inverness	5 Tonne	1	(iii)
Frontline Loading Plant	Kingussie	5 Tonne	1	(iii)
Frontline Loading Plant	Portree	5 Tonne	1	(iii)
Frontline Loading Plant	Ardelve	5 Tonne	1	(iii)
Frontline Loading Plant	Corpach	5 Tonne	1	(iii)
Frontline Loading Plant	Oban	5 Tonne	1	(iii)
Frontline Loading Plant	Inveraray	5 Tonne	1	(iii)
Frontline Loading Plant	Machrahanish	5 Tonne	1	(iii)
Frontline Loading Plant	Killin	5 Tonne	1	(iii)
Frontline Loading Plant	Perth	5 Tonne	1	(iii)
Frontline Loading Plant	Ballinluig	5 Tonne	1	(iii)
Frontline Loading Plant	Ballachulish	5 Tonne	1	(iii)
Fastrac tractor (or equivalent) with snowblower attachment	Inverness	600 tonnes per hour	1	(iii)
Fastrac tractor (or equivalent) with snowblower attachment	Kingussie	600 tonnes per hour	1	(iii)
Fastrac tractor (or equivalent) with snowblower attachment	Corpach	600 tonnes per hour	1	(iii)
Fastrac tractor (or equivalent) with snowblower attachment	Killin	600 tonnes per hour	1	(iii)

* Table 6.1.6 Key:

- (i) precautionary treatment and clearance of snow with a depth up to 100 millimetres.
- (ii) Winter Service Patrols.
- (iii) Other arrangements to comply with the requirements of this Schedule 2 Scope, Appendix 6 Winter Service Attachments.

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Table 6.1.7 - Front line Winter Service Plant permanently available and located in the Unit for the Winter Service for footways footbridges and cycling facilities

Type of Winter Service Plant & Reg. No.	Depot Location	Vehicle Capacity	Number of Vehicles	Plant Use* (i), (ii), (iii)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Dunbeath	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Golspie	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Inverness	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Kingussie	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Portree	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Ardelve	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Corpach	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Oban	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Inveraray	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Killin	500 Litres	1	(i)
Footway tractor or equivalent with brine tank and sprayer unit serviced by pickup and trailer with 1,000 litre IBC	Perth	500 Litres	1	(i)
HSS760 ETD Honda Snow Blower Electric Start or equivalent	Kingussie	42 tonnes per hour	1	(i)

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HSS760 ETD Honda Snow Blower Electric Start or equivalent	Killin	42 tonnes per hour	1	(i)
HSS760 ETD Honda Snow Blower Electric Start or equivalent	Perth	42 tonnes per hour	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Dunbeath	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Golspie	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Inverness	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Kingussie	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Portree	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Ardelve	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Corpach	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Oban	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Inveraray	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Killin	50 litres	1	(i)
SnowEx SS-80 Walk Behind Liquid Sprayer or equivalent	Perth	50 litres	1	(i)

* Table 6.1.7 Key:

- (i) precautionary treatment and clearance of snow with a depth up to 100 millimetres.
- (ii) Winter Service Patrols.
- (iii) In accordance with other requirements of Schedule 2 Scope, Section 6 Network Operations - Winter Service.

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Table 6.1.8 - Reserve Winter Service Plant permanently available and located in the Unit for Winter Service for carriageways footways footbridges and cycling facilities

Type of Winter Service Plant & Reg. No.	Depot Location	Vehicle Capacity	Number of Vehicles
4 axles rigid / 32 tonnes / 2 axle drive	Dunbeath	12m ³ Demount	1
4 axles rigid / 32 tonnes / 2 axle drive	Corpach	12m ³ Demount	1
4 axles rigid / 32 tonnes / 2 axle drive	Ardelve	12m ³ Demount	1
4 axles rigid / 32 tonnes / 2 axle drive	Inveraray	12m ³ Demount	1
4 axles rigid / 32 tonnes / 2 axle drive	Perth	12m ³ Demount	1
4 axles rigid / 32 tonnes / 2 axle drive	Inverness	12m ³ / 1000 litres Fixed Body Combi	1
3 axles rigid / 26 Tonnes / 2-axle drive	Kingussie	9m ³ Demount	1
3 axles rigid / 26 Tonnes / 2-axle drive	Killin	9m ³ Demount	1
2 axles rigid / 18 Tonnes / 1-axle drive	Inverness	6m ³ Demount	1
2 axles rigid / 18 Tonnes / 1-axle drive	Corpach	6m ³ Demount	1
2 axles rigid / 18 Tonnes / 1-axle drive	Killin	6m ³ Demount	1
2 axles rigid / 18 Tonnes / 1-axle drive	Perth	6m ³ Demount	1
Footway tractor or equivalent with brine tank and sprayer unit	Inverness	500 litres	1
Footway tractor or equivalent with brine tank and sprayer unit	Corpach	500 litres	1
Footway tractor or equivalent with brine tank and sprayer unit	Inverary	500 litres	1
Footway tractor or equivalent with brine tank and sprayer unit	Perth	500 litres	1

Table 6.1.8 Key:

- (i) precautionary treatment and clearance of snow with a depth up to 100 millimetres.
- (ii) Winter Service Patrols

Table 6.1.9 - Additional Winter Service Plant

Type of Winter Service Plant & Reg Number	Depot Location or Third Party Operator and Location	Number of Vehicles	Mobilisation Time in Hours
REDACTED	REDACTED	1	4
REDACTED	REDACTED	1	4
REDACTED	REDACTED	1	4
REDACTED	REDACTED	1	4
REDACTED	REDACTED	1	4

Table 6.1.10 – The Operating Company's Compounds, Depots and Facilities

Compound Depot or Facility Name	Owner	Postal Address	Purpose	Access Arrangements	Contact Details	Facilities
REDACTED D	REDACTED D	REDACTED	Operational Depot	Local road access to A9		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED		Operational Depot	Local road access to A9		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Design Office and Operational Depot	Local road access to A9		Design office with mess and welfare facilities for staff; operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Operational Depot	Local road access to A86		Operations office with mess and welfare facilities for

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						staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Operational Depot	Local road access to A87		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED		Operational Depot	Local road access to A87		Plant garaging and parking; equipment and material stores; brine production and storage.
REDACTED D	REDACTED	REDACTED	Operational Depot	Local road access to A85		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Operational Depot	Direct access to A830		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment

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						and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Operational Depot	Direct access to A82		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store
REDACTED D	REDACTED	REDACTED	Operational Depot	Local road access to A83		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED	REDACTED	REDACTED	Operational Depot	Local road access to A83		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Operational Depot	Local road access to A85		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store

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						and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Operational Depot	Direct access to A9		Operations office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	Central Office, Network Control Hub and Operational Depot	Local road access to A9		Central Office, Network Control Hub and design office with mess and welfare facilities for staff; operational office with mess and welfare facilities for staff and operatives; plant garaging and parking; equipment and material stores; salt store and weighbridge; brine production and storage.
REDACTED D	REDACTED	REDACTED	ISU Station	Local road access to A835		Welfare and Parking.

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Attachment 6.2 Winter Service Plan

Table 6.2.1 Winter Service Plan - Contents (See 6.1 for appendices)

Item	Contents
1	Management Arrangements
	the Winter Service Plan shall provide the following:
1.1	Winter Service Manager
1.1.1	Name,
1.1.2	Qualifications,
1.1.3	Experience,
1.1.4	Responsibilities.
1.2	Winter Service Duty Officers
1.2.1	Names,
1.2.2	Qualifications,
1.2.3	Experience,
1.2.4	Responsibilities.
1.3	Monitoring Arrangements
1.3.1	Monitoring arrangements during normal working hours,
1.3.2	Monitoring arrangements outwith normal working hours.
1.4	Personnel Resources
1.4.1	Names of Contract Personnel and labour resources.

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1.4.2 Availability rosters including names, addresses and telephone numbers of the Contract Personnel listed.

1.5 Call out arrangements

1.5.1 Call out arrangements during normal working hours,

1.5.2 Call out arrangements outwith normal working hours,

1.5.3 Contact arrangements during normal working hours,

1.5.4 Contact arrangements outwith normal working hours,

1.5.5 Mobilisation times.

1.6 Communications Equipment

1.7 Training for Managers and Other Staff

1.7.1 Details of previous training,

1.7.2 Details of proposed training.

2 Weather Forecasting

2.1 Purpose

2.2 Methodology

2.3 Weather forecasting service

2.3.1 Climatic domains,

2.3.2 Weather radar,

2.3.3 Weather Stations, forecast sites and camera sites,

2.3.4 Thermal mapping,

2.3.5 Location plans.

2.4 Computer Systems

3 Monitoring Arrangements for Areas Requiring Special Attention

4 Decision Making

4.1 Role of the Winter Service Manager

4.2 Role of the Winter Service Duty Officer

4.2.1 Procedures for Winter Service Patrol mobilisation.

4.2.2 Proposals for precautionary and additional de-icing treatments when low confidence forecasts are issued for variable road and weather conditions.

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

4.2.4 Road closure and snow gate operational procedures.

4.2.5 Proposals for dealing with areas requiring special attention.

4.2.6 Proposals for using alternative de-icers in extreme temperatures.

5 Liaison & Communication

5.1.1. Liaison and communication with:

(i) the Director,

(ii) the Police Scotland,

(iii) the Traffic Scotland Operations and Infrastructure Services Contractor,

(iv) adjacent road and highway authorities,

(iv) Network Rail,

(vi) Other Operational Partners.

6 Mutual Aid Arrangements

6.1 Mutual Aid

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6.1.1 A statement explaining what Mutual Aid arrangements are in place, including contact details.

7 Winter Service Patrols

7.1 Winter Service Plan and Reporting

7.1.1 Winter Service Plan provided by the Operating Company for the Winter Service Patrols shall be as referred to in Schedule 2 Scope, Appendix 6 Winter Service Attachment 6.1 Appendices for Winter Service Plan.

7.1.2 A Winter Service Patrol Report shall be provided by the Operating Company in the format referred to in Schedule 2 Scope, Appendix 6 Winter Service Attachment 6.1 Appendices for Winter Service Plan.

8 Treatment Routes

8.1.1 In accordance with Schedule 2 Scope, Appendix 6 Winter Service Attachment 6.1 Appendices for Winter Service Plan.

(i) precautionary treatment routes, including sections shared with an adjacent road authority,

(ii) contingency plans for alternative access to precautionary treatment routes where normal access is prevented due to weather related or other Incidents,

(iii) locations of de-icing material loading points, and

(iv) cycling facilities in urban areas

8.1.2 The Operating Company shall provide details of cycling facilities in urban areas in Schedule 2 Scope, Appendix 6 Winter Service Attachments 6.1 Appendices for Winter Service Plan.

9 Snow and Ice Clearance

9.1 Snow Clearing

9.1.1 Arrangements and resources for managing snowfall. The Winter Service Plan shall demonstrate how all carriageways shall be maintained free from snow or ice as far as

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is reasonably practicable and in accordance with Schedule 2 Scope, Appendix 6 Winter Service Attachments 6.12 Snow Clearance.

9.1.2 Road closure procedure including use of snow gates.

9.1.3 Prolonged snowfall strategy, including use of additional Winter Service Plant and operative resources.

9.1.4 Snow and ice clearance in accordance with Schedule 2 Scope, Appendix 6 Winter Service Attachment 6.11 De-Icing Material Spread Rates.

9.1.5 Arrangements for safe clearance of snow or ice from wide single carriageways.

9.1.6 Treatment strategy for bridge service roads, footways (including those on bridge decks), footpaths and cycling facilities including location of salt bins where applicable in accordance with Schedule 2 Scope, Appendix 6 Winter Service Attachments 6.10 - Categories A and B Footways, Footbridges & Cycle Facilities.

9.2 Plans showing the location of the footways, footbridges and cycling facilities in Categories A, and B.

10 Freezing Rain/Rain Falling On Extremely Cold Surfaces

10.1 Advance Planning

10.1.1 Advanced planning for freezing rain/rain falling on extremely cold surfaces including as a minimum:

(i) arrangements for liaison with Police Scotland, Traffic Scotland Operations and Infrastructure Services Contractor and other interested parties, and

(ii) risk assessments .

10.2 Operational Arrangements

10.2.1 Operational arrangements for managing freezing rain/rain falling on extremely cold surfaces including as a minimum:

(i) details of treatment regimes in advance of, during and following a freezing rain event, and

(ii) arrangements for monitoring.

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10.3 Hazard Mitigation

10.3.1 Hazard mitigation for freezing rain/rain falling on extremely cold surfaces including as a minimum:

(i) arrangements for informing road users including use of Variable Message Signs, and

(ii) road closure procedure, rolling blocks and convoy arrangements.

11 De-icing Materials

11.1 Details

11.1.1 For each type of de-icing material, including alternatives:

(i) detailed specification of material,

(ii) storage conditions, system types and capacities,

(iii) details on testing methods, including their type and frequency,

(iv) state suppliers, including any secondary suppliers,

(v) state any importers used to meet supply demands,

(vi) stock levels (total and split by location), and

(vii) details of re-stocking, including procurement mechanism and details of stock level monitoring.

11.1.2 Details of de-icing materials stocks shall be provided by the Operating Company in Schedule 2 Scope, Appendix 6 Winter Service Attachments 6.1 Appendices for Winter Service Plan and shall take account of the minimum stock levels to be maintained as referred to in the Appendix.

12 Strategic Salt Stocks

12.1 Details

12.1.1 Strategic salt stocks including as a minimum:

(i) suppliers including locations, initial delivery points and haulage arrangements,

(ii) third parties, liaison arrangements, haulage, delivery and 24 hour access arrangements, and

(iii) administration of strategic salt stocks

13 Winter Service Plant

13.1.1 In accordance with Schedule 2 Scope, Appendix 6 Winter Service Attachment 6.1 Appendices for Winter Service Plan:

13.1.2 (i) the Operating Company's front line Winter Service Plant and reserve Winter Service Plant available on the Unit for the Winter Service,

13.1.3 (ii) the Operating Company's additional Winter Service Plant available through contingency arrangements and arrangements for the mobilisation of such additional Winter Service Plant for the Winter Service, and

(iii) loading Winter Service Plant available on the Unit for loading such front line, reserve and additional Winter Service Plant .

13.2 Calibration of Winter Service Plant

13.2.1 Calibration arrangements and procedures for front line and reserve Winter Service Plant, in accordance with Schedule 2 Scope, Section 6 Network Operations - Winter Service, 6.5.7, 6.5.8 and 6.5.9.

13.2.2 The Winter Service Plan will describe how the requirements of this Part shall be met and where and how the calibration certificates will be held.

14 Compounds, Depots and Facilities

14.1 In Schedule 3 Contract Management, Appendix 3 Offices, depots & other infrastructure incl. plant, a schedule of compounds, depots and facilities covering the network of the Unit.

15 Maps, Drawings and Graphical Information

15.1 Maps

15.1.1 Provide scale maps for the following:

(i) precautionary treatment routes for carriageways, including on/off slips and depots,

(ii) precautionary treatment routes for footways, footbridges and cycling

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facilities,

(iii) reactive treatment routes for footways, footbridges and cycling facilities,

(iv) Winter Service Patrol routes,

(v) ploughing routes for carriageways, including on/off slips and depots,

(vi) Weather stations including sensor types and where these sites are equipped with weather cameras, (map to differentiate between single and bidirectional cameras),

(vii) snow gates,

(viii) snow fences,

(ix) shelter belts,

(x) snow poles,

(xi) snow or ice and hidden message signs,

(xii) salt bins,

(xiii) vertical concrete barriers,

(xiv) other facilities, and

(xv) where route based forecasting is not used, climatic domains and the sensors used to generate domain forecasts.

16 Compiling and Maintaining Records

17 Snow Poles

17.1 Maintenance, replacement of damaged or missing snow poles, refurbishment and reserve stocks

18 Snow Gates

18.1 Maintenance, operation and liaison.

19 Variable Message Snow and Ice and Hidden Message Signs

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19.1	Maintenance and operation of message signs and associated liaison arrangements.
19.1.1	A schedule that specifies the type and location of the following signs in the Unit: (i) fixed message signs, (ii) variable message signs, (iii) snow hidden message signs, (iv) ice hidden message signs, and (v) road closure hidden message signs
20	Salt Bins
20.1	Stock level monitoring and replenishment procedures.
21	Salt Measurement Apparatus
21.1	Equipment and locations and recording methods.

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Attachment 6.3 Salt Stock Monitoring Report

Operating Company:	Reporting Month:
1) Salt used during reporting period:	
2) Actual salt stocks held at the end of the reporting period:	
3) Salt orders placed and deliveries received during reporting period:	
4) Salt orders expected during next reporting period (include imports, dates deliveries expected & tonnage expected):	
5) Forecast usage during next reporting period	
6) Any other items to report (such as reduced treatment networks, any notable arrangements with local authorities, etc.)	

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Attachment 6.4 Winter Service Report

Table 6.4.1 Winter Service Report – Contents

Item	Contents
1	The Winter Service report shall provide:
1.1	An executive summary of the annual report.
1.2	An overview and review of the service provided.
1.3	A summary of key performance reports.
1.4	Information on significant events and related actions.
1.5	An assessment of the accuracy of weather forecasts provided.
1.6	An assessment of weather station and camera performance.
1.7	An analysis of the ability of the Management System to capture reported Non-Conformances.
1.8	Details of innovations and improvements implemented.
1.9	Recommendations for continuous improvement.
1.10	Details of actions taken during periods of low confidence forecasting for variable and marginal winter weather conditions.
1.11	Details of Winter Service Plant available, including reserve and additional Winter Service Plant.

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Attachment 6.5 Locations of Winter Service Infrastructure

Table 6.5.1 - Locations of Snow Fences, Snow Gates and Salt Bins

Route	Snow Fence (meters)	Snow Gates (Number)	Salt Bins (Number)
A9	1630	8	10
A99	0	0	0
A82	0	3	7
A83	0	0	4
A830	0	0	0
A835	850	2	4
A84	0	0	2
A85	0	0	4
A86	0	0	3
A87	0	0	6
A887	0	0	0
A889	0	2	2
A893	0	0	0
A828	0	0	0

Table 6.5.2 - Locations of Hidden Message Signs

Road Number	Location	Detailed Description
A82	Tyndrum	Snow Gate
A82	Bridge of Orchy	Snow Gate
A82	Glencoe Garage	Sign Type 554
A82	North Ballachullish	Sign Type 554
A82	Clifton	Snow Gate
A82	Glencoe Police Station	Snow Gate

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A830	Muidhe	Sign Type 554
A830	Craigag Bridge	Sign Type 554
A830	Glenfinnan	Sign Type 554
A830	Banavie	Sign Type 554
A835	Altguish Hotel	Snow Gate
A835	Braemore Junction	Snow Gate
A87	Cluanie (2 no.)	Sign Type 554
A9	Berriedale	Snow Gate
A9	Dunbeath	Snow Gate
A9	Daviot Brae N/B Left Verge	Sign Type 554
A9	Daviot Brae N/B Central Reservation	Sign Type 554
A9	Drumrossie Brae S/B Left Verge	Sign Type 554
A9	Drumrossie S/B Central Reservation	Sign Type 554
A9	Slochd Summit	Sign Type 554
A9	Blackmount Junction	Sign Type 554
A9	Dalwhinnie Junction	Snow Gate
A9	Blair Atholl South Junction	Snow Gate
A9	Navidale	Snow Gate
A9	Ralia Junction	Snow Gate
A9	Trinafour Northbound	Snow Gate
A9	Trinafour Southbound	Snow Gate
A9	Essangael	Snow Gate

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Table 6.5.3 - Locations of Weather Stations, Forecast Sites and Camera Sites (Single or Bi-Lateral)

Road Number	Location
A82	Allt na Feadh
A82	Inchnacardoch
A82	Friars Bridge
A82	Invergarry
A82	Spean Bridge
A82	Tarbet
A82	Torvean
A82	West Laroach
A82	Tyndrum
A83	Furnace
A83	Rest and Be Thankful
A83	Kennacraig
A83	Clachan
A830	Blar mor
A830	Morar
A830	Glenfinnan
A835	Braemore
A835	Brahan
A835	Aultguish
A84	Drumvaich
A84	Glenogle
A85	Dalmally
A85	McAras Brae

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A85	Tofts
A86	Roy Bridge
A86	Tullochroam
A87	Cluanie
A87	Glen Varragill
A87	Ard Dorch
A87	Skye Bridge
A887	Achlain
A889	Catlodge
A9	Achavanich
A9	Avielochan
A9	Balvraid
A9	Berriedale
A9	Bogbuie
A9	Calvine
A9	Daviot
A9	Delny
A9	Dornoch Bridge
A9	Drumochter
A9	Dunkeld
A9	Kessock Bridge
A99	Lybster
A9	Ord Ousdale
A9	Slochd
A9	Sordale
A828	Barcaldine

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Table 6.5.4 - Locations of Snow Poles

Route	Link	Section	Start Chainage	End Chainage	Spacing (metres)	Number
A83	16512	19	4400	6930	50	50
	16512	19	4400	6930	50	50
	16512	59	0	2370	50	47
	16512	59	0	2370	50	47
	16512	73	0	3600	50	72
	16512	73	0	3600	50	72
	A83 Total			338		
A85	11910	05	0	680	50	14
	11910	05	0	680	50	14
	11910	08	0	2608	50	52
	11910	08	0	2608	50	52
	11910	20	0	3206	50	64
	11910	20	0	3206	50	64
	11910	37	0	4964	50	99
	11910	37	0	4964	50	99
	11910	59	0	3957	50	79
	11910	59	0	3957	50	79
	A85 Total			616		
A835	18010	05	30	2040	50	40
	18010	10	80	200	50	2
	18010	50	2335	4240	50	38
	18010	50	3779	4240	50	9
	18010	60	0	6470	50	129
	18010	60	0	6470	50	129
	18010	70	0	7880	50	157
	18010	70	0	7880	50	157
	A835 Total			661		
Route	Link	Section	Start Chainage	End Chainage	Spacing (metres)	Number
A86	12940	65	90	3236	50	64
	12940	65	90	3236	50	64

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	12940	65	200	400	50	5	
	12940	65	100	400	50	4	
	A86 Total			137			
A889	12705	05	0	180	50	3	
	12705	05	0	180	50	3	
	12705	05	865	1170	50	6	
	12705	05	865	1170	50	6	
	A889 Total			18			
A82	10838	05	0	2632	50	52	
	10838	05	0	2632	50	52	
	10850	05	260	3156	50	57	
	10850	05	260	3156	50	57	
	10850	11	15	3214	50	63	
	10850	11	15	3214	50	63	
	10850	45	45	3165	50	62	
	10850	45	45	3165	50	62	
	10850	56	16	1097	50	21	
	10850	56	16	1097	50	21	
	10861	00	41	8981	50	178	
	10861	00	41	8981	50	178	
	10861	25	0	2515	50	50	
	10861	25	0	2515	50	50	
	10861	35	0	5797	50	115	
	10861	35	0	5797	50	115	
	10861	45	0	1200	50	24	
	10861	45	0	1200	50	24	
		A82 Total			1244		
	Route	Link	Section	Start Chainage	End Chainage	Spacing (metres)	Number
A9	10489	20	0	2120	50	42	
	10489	25	350	740	50	7	
	10489	25	1135	1404	50	5	
	10489	30	0	1130	50	22	
	10489	60	165	330	50	3	
	10440	44	765	1315	50	11	

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10440	44	3300	3800	50	10
10440	44	4170	4460	50	5
10440	44	6860	8255	50	27
10440	44	6860	8255	50	27
10440	66	0	1317	50	26
10440	67	0	1312	50	26
10440	70	0	4540	50	90
10440	70	5350	8481	50	62
10440	81	0	8446	50	168
10440	92	0	3250	50	65
10440	92	0	3250	50	65
10441	0	0	7269	50	145
10441	0	0	7269	50	145
10442	05	0	4356	50	87
10442	05	0	4356	50	87
10442	25	0	5233	50	104
10442	25	0	5233	50	104
10442	50	0	1344	50	26
10442	51	0	1338	50	26
10446	75	1600	1920	50	6
10446	75	1800	2630	50	16
10447	05	0	851	50	17
10447	10	260	900	50	12
A9 Total			1465		

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Table 6.5.5 Locations of Vertical Concrete Barriers

None.

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Attachment 6.6 Winter Service Patrols

Table 6.6.1 – Category A and B Winter Service Patrol Routes

Route	Category
A9 - Perth to Inverness	A
A82 Ballachulish to Tarbet	A
A82 from Stoneymollan Roundabout to Tarbet	B
A9 from Inverness to Brora	B
A9 Brora to Thurso (ferry port)	B
A835 Contin to Ullapool (ferry port)	B
A82 Fort William (Lochybridge) to Inverness (Tomnahurich)	B
A84 Lochearnhead to Stirling	B
A85 Oban to Tyndrum	B
A85 Lochearnhead to Crianlarich	B
A85 Lochearnhead to Perth	B
A87 Invergarry to Shiel Bridge	B
A887 Bunloyne to Invermoriston	B
A83 Inveraray to Tarbet	B

Notes:

1. Details of the Operating Company's Winter Service Patrol routes shall be as provided by the Operating Company in Schedule 2 Scope, Appendix 6 Winter Service Attachments 6.1 Appendices for Winter Service Plan.
2. Patrol reports shall be recorded in accordance with Schedule 2 Scope, Appendix 6 Winter Service, Attachment 6.1 Appendices for Winter Service Plan.

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Attachment 6.7 Location of Known Vulnerable Locations

Table 6.7.1 - Frost Susceptible Areas

Road Number	Location
A9	Latheron to Mybster
A9	Berriedale
A9	Kildary to Tain
A835	Inchbae
A835	South of Aultguish
A887	Near Dundreggan
A87	Glenshiel
A87	Kinlochourn
A87	Glen Varragill
A82	Glen Gloy Bends
A82	Spean Bridge
A830	Glenfinnan
A830	Mhuidie Hill
A830	West of Loch Elit
A86	Near Glen Spean
A86	Tulloch
A86	Near Comra
A86	Strathmashie
A82	Three Mile Water
A82	Glen Coe
A82	Bridge of Orchy
A85	Glen Dochart – Lix Toll
A85	Glen Ogle
A85	South of Strone
A85	Glen Lochy

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A85	St. Fillans - Lochearnhead
A85	Dunira
A84	Dandues Brae, Doune
A83	Auchindrain
A9	Loch Faskally
A9	Killiecrankie
A9	Near Dalwhinnie
A9	Kingussie
A9	Slochd
A9	Findhorn
A9	Daviot

Table 6.7.2 - Water Run Off Locations

Road Number	Location
A9	Achavanich to Tacher
A9	Borrowston Quarry
A9	Dunbeath Mains
A9	Knockinnon
A9	Newport
A9	Keepers Cottage Ousdale
A9	Layby 190
A9	Balvraid
A830	West of Loch Elit
A86	Near Glen Spean
A86	Near Comra
A85	Glen Dochart – Lix Toll

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A85	Loch Awe to Brander Lodge
A85	Glen Ogle
A82	Inverarnan to Tarbet
A85	St. Fillans - Locheearnhead
A85	Abercairney
A85	A85 Ochertyre
A85	A85 Cultoquoy
A84	Leny Falls
A83	Stonefield
A83	Mundells, Tarbert
A9	Avielochan
A9	Moy
A9	Daviot Northbound

Table 6.7.3 - Gradient Locations

Road Number	Location
A9	Calvine to Dalnaspidal
A9	Drumossie Brae southbound
A82	Tyndrum to Glen Coe
A83	Rest and Be Thankful
A85	Glen Ogle
A87	Invergarry to Shiel Bridge
A887	Invermoriston to Bunloyne
A835	Corrieshalloch

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Attachment 6.8 Records

Table 6.8.1 – Records

Item	Contents include:
1	Decisions taken, when and by whom,
2	Planned and actual treatment records,
3	Planned and actual response times achieved,
4	Planned and actual commencement times,
5	Planned and actual route times,
6	Planned and actual spread rates,
7	Observations and actions taken by the Winter Service Patrols,
8	Output from Winter Service Plant on-board data capture devices,
9	Winter Service Plant down time and software faults,
10	Winter Service Plant deployment records (including vehicle location records) and driver and operator logs,
11	Logs (both manual and electronic) for telephone, electronic mail and two way communication calls,
12	Loading point de-icing stocks and replenishment orders,
13	Ice prediction system Records,
14	Weather forecasts and actual weather experienced,
15	Complaints by members of the public and Trunk Road users,
16	Accidents during winter conditions,
17	Road closures due to winter conditions,
18	Weights and volumes as appropriate for the amount of de-icing material(s) spread for each route,
19	Pre- and mid-season road sensor calibration systems,
20	Winter Service Plant calibration certificates, and
21	Actual salt stocks held including strategic salt stocks.

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**Attachment 6.9 Potassium Acetate Treatment
Table 6.9.1 - Potassium Acetate Treatment**

Road Number	Location
A9	Kessock Bridge
A82	Friars Bridge and Approaches
A9	Cromarty Bridge
A9	Dornoch Bridge
A87	Carrich Bridge
A87	Skye Bridge

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Attachment 6.10 Footways, Footbridges and Cycleways – Response Times and Clearance Requirements

Table 6.10.1 - Footways, Footbridges and Cycleways – Precautionary Treatment Requirements

Categories	Requirements
A and B	Complete pre-cautionary treatment before 06.00 hours each morning or one hour in advance of road surface temperature (RST) falling below +1°C.

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Table 6.10.2 - Footways, Footbridges and Cycleways – Response Times and Clearance Requirements for Snow or Ice Occurring Together

Categories	Requirements		
	General	Between 06.00 and 19.00 hours	Treatments out with daytime hours
A	Between the hours of 06.00 and 19.00, 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.

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Table 6.10.3 – Footways, Footbridges and Cycleways within the Unit

Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
1	A82/A83	Tarbet		10826/70 ch 3795 (Speed Limit Signs)	10827/05 ch 415 (Filling Station)	870
				16501/05 ch 0 (A82 Jct)	16501/05 ch 990 (Speed Limit Signs)	990
2	A82/A85	Criarlarich		10836/80 ch 1340 (House Access)	10836/93 ch 335 (Railway Yard Access)	345
				10836/93 ch 545 (Railway Bridge)	10837/04 ch 380 (End of Footway)	465
				16302/82 ch 2590 (Speed Limit Signs)	16302/95 ch 470 (A82 Jct)	690
3	A82	Tyndrum		10837/65 ch 2295 (Speed Limit Signs)	10837/65 ch 2835 (Filling Station)	540
4	A82	Onich		10864/00 ch 2645 (Speed Limit Signs)	10864/70 ch 295 (Speed Limit Signs)	1540
5	A82/A830	Fort William		10866/10 ch 8355 (Speed Limit Signs)	10869/00 ch 315 (Access to Trading Estate)	7831
				17202/00 ch 0 (Loch Bridge Jct)	17202/00 ch 560 (Speed Limit Signs)	560
6	A82/A86	Spean Bridge		10869/95 ch 355 (Speed Limit Signs)	10870/00 ch 305 (Speed Limit Signs)	690

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
				12960/90 ch 10 (Junction)	12960/90 ch 493 (A82 Jct)	483
7	A82	Fort Augustus		10877/75 ch 3740 (Speed Limit Signs)	10880/05 ch 545 (Speed Limit Signs)	1585
8	A82/ A887	Invermoriston		10880/80 ch 1792 (Speed Limit Signs)	10880/80 ch 2273 (Junction with A887)	481
				10885/05 ch 0 (Junction with A887)	10885/05 ch 172 (Speed Limit Signs)	172
				12805/05 ch 0 (Junction with A82)	12805/05 ch 632 (Speed Limit Signs)	632
9	A82	Drumnadrochit		10885/60 ch 3610 (Speed Limit Signs)	10890/05 ch 320 (Speed Limit Signs)	1890
10	A82	Inverness		10890/90 ch 2460 (Speed Limit Signs)	10892/05 ch 1240 (THC HQ)	1700
				10892/05 ch 1240 (THC HQ)	10892/05 ch 1515 (Kenneth St Junction)	420
				10892/05 ch 1515 (Kenneth St Junction)	10898/05 (Rose St Roundabout)	1400
				10898/05 (Rose St Roundabout)	10899/05 (Harbour Road Roundabout)	1100
				10899/05 (Harbour Road Roundabout)	10899/50 ch 150 (Speed Limit Signs)	700

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
11	A828	Appin		17020/87 ch 2150 (Church)	17030/05 ch 390 (Bridge)	440
12	A828	Benderloch & Ledaig		17010/33 ch 70 (Start of Footway)	17010/33 ch 1170 (Junction)	1100
13	A83	Tarbert		16570/05 ch 20 (Start of Footway)	16570/06 ch 256 (End of Footway)	1232
14	A83	Ardrishaig		16555/06 ch 626 (Ardrishaig Sign)	16565/05 ch 481 (Speed Limit Sign)	2938
15	A83	Lochgilphead		16540/94 ch 0 (Speed Limit Signs)	16540/94 ch 240 (Manse Brae)	240
				16540/94 ch 240 (Manse Brae)	16540/95 ch 325 (Lorne Street)	505
				16540/95 ch 325 (Lorne Street)	16540/95 ch 455 (Speed Limit Sign)	130
16	A83	Minard		16540/19 ch 0 (Speed Limit Signs)	16540/19 ch 970 (End of Footway)	970
17	A83	Furnace		16540/05 ch 0 (Start of Footway)	16540/05 ch 515 (End of Footway)	515
18	A83	Inveraray		16520/85 ch 2770 (Start of Footway)	16530/05 ch 140 (Start of Main Street)	150
				16530/05 ch 140 (Start of Main Street)	16530/06 ch 90 (Church)	90

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
				16530/06 ch 90 (Church)	16530/10 ch 410 (Speed Limit Signs)	1000
19	A83	Arrochar & Succoth		16501/05 ch 2075 (Speed Limit Signs)	16512/05 ch 520 (Speed Limit Signs)	1895
20	A830	Mallaig		17215/61 ch 1400 (Speed Limit Sign)	17215/61 ch 1630 (End of Trunk Road)	230
21	A830	Arisaig		(Speed Limit Sign)	(Speed Limit Sign)	495
22	A830	Corpach		17205/00 ch 350 (Speed Limit Signs)	17205/15 ch 30 (Speed Limit Signs)	2370
23	A835	Contin		18004/50 ch 760 (Start of Footway)	18006/06 ch 472 (Speed Limit Signs)	1232
24	A835	Garve		18006/76 ch 3217 (Start of Footway)	18008/06 ch 250 (End of Footway)	760
25	A835/ A893	Ullapool		18012/75 ch 3000 (Braes Junction)	18012/75 ch 4020 (A835/A893 Jct)	1020
				18014/05 ch 0 (A835/A893 Jct)	18014/05 ch 370 (Ferry Terminal)	370
26	A84	Doune		16212/68 ch 0 (Speed Limit Signs)	16213/04 ch 212 (Speed Limit Signs)	1122
27	A84	Burn of Cambus		16213/06 ch 940 (Speed Limit Signs)	16213/06 ch 1595 (Speed Limit Signs)	655

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
28	A84	Callander		16215/05 ch 0 (Speed Limit Signs)	16215/38 ch 115 (Menteith Crescent)	975
				16215/38 ch 115 (Menteith Crescent)	16220/04 ch 120 (Ancaster Road)	825
				16220/05 ch 0 (Ancaster Road)	16220/05 ch 830 (Speed Limit Signs)	830
29	A84	Kilmahog		16220/48 ch 584 (Start of Footway)	16220/48 ch 895 (End of Footway)	311
30	A84	Strathyre		16225/51 ch 2705 (Start of Footway)	16225/58 ch 610 (End of Footway)	665
31	A84/ A85	Lochearnhead		16225/94 ch 0 (Speed Limit Signs)	16225/94 ch 570 (A85 Jct)	570
				13930/81 ch 585 (Start of Footway)	16301/03 ch 190 (End of Footway)	743
32	A85	Oban		11940/05 ch 815 (Speed Limit Signs)	11940/34 ch 490 (Dunollie Road)	605
				11940/71 ch 0 (Dunollie Road)	11940/56 ch 0 (Corran Esplanade)	1090
				11940/89 ch 0	11940/94 ch 130 (End of Trunk Road)	290
33	A85/ A828	Connel		11920/80 ch 5790 (Speed Limit Signs)	11930/05 ch 580 (Speed Limit Signs)	1810

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
				17010/05 ch 0 (A85 Jct)	17010/06 ch 220 (Speed Limit Signs)	890
34	A85	Taynuilt		11920/52 ch 2890 (Junction)	11920/65 ch 830 (End of Footway)	1740
35	A85	Lochawe		11920/05 ch 1955 (Speed Limit Signs)	11920/18 ch 550 (Filling Station)	2045
36	A85	Dalmally		11910/80 ch 2450 (Start of Footway)	11910/80 ch 3430 (Dalmally Jct)	980
37	A85	St. Fillans		13925/58 ch 0 (Junction)	13925/58 ch 1390 (Junction)	1390
38	A85	Comrie		13920/85 ch 0 (Speed Limit Signs)	13925/07 ch 365 (Bridge Jct)	1263
39	A85	Crieff		13915/60 ch 0 (Speed Limit Signs)	13915/60 ch 905 (Dollerie Street)	905
				13915/67 ch 0 (Dollerie Street)	13915/80 ch 130 (Burrell Street)	738
				13915/80 ch 130 (Burrell Street)	13920/10 ch 872 (Speed Limit Signs)	956
40	A85	Gilmerton		13910/99 ch 45 (Junction)	13915/05 ch 178 (Speed Limit Signs)	382
41	A85	Methven		13910/27 ch 150 .. (Start of Footway)	13910/37 ch 70 (Speed Limit Signs)	1072

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
42	A85	Perth & Huntingtower		13905/10 ch 0 (Roundabout)	13910/07 ch 20 (Speed Limit Signs)	809
				13910/07 ch 620 (Speed Limit Signs)	13910/10 ch 90 (End of Footway)	1153
43	A86	Kingussie		12915/40 ch 0 (Speed Limit Signs)	12915/40 ch 265 (Manse Road)	265
				12915/40 ch 265 (Manse Road)	12915/40 ch 795 (Station Road)	530
				12920/05 ch 0 (Station Road)	12920/05 ch 465 (Speed Limit Signs)	465
44	A86	Newtonmore		12920/10 ch 2730 (Speed Limit Signs)	12920/70 ch 965 (Primary School)	1191
				12920/70 ch 965 (Primary School)	12920/70 ch 1353 (B9150 Jct)	388
				12925/05 ch 0 (B9150 Jct)	12925/05 ch 25 (End of Footway)	25
				12925/05 ch 200 (Hotel Entrance)	12925/05 ch 450 (End of Footway)	250
45	A87	Uig		17493/60 ch 65 (Start of Footway)	17495/05 ch 1322 (End of Trunk Road)	2647
46	A87	Kensaleyre		17485/05 ch 990 (Speed Limit Signs)	17485/05 ch 1990 (End of Footway)	1000

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
47	A87	Portree		17465/05 ch 1815 (Speed Limit Signs)	17475/05 ch 340 (Junction)	1901
48	A87	Broadford		17430/05 ch 0 (A851 Jct)	17440/15 ch 40 (Junction)	2826
49	A87	Kyle of Lochalsh & Kyleakin		17410/96 ch 0 (Speed Limit Signs)	17412/30 ch 90 (Toll Station)	1269
				17415/05 ch 0 (Bridge Barrier)	17415/20 ch 210 (Restaurant Entrance)	319
50	A87	Balmacara		17410/00 ch 2700 (Speed Limit Signs)	17410/00 ch 3200 (Speed Limit Signs)	500
51	A87	Inverinate		17406/00 ch 3850 (Speed Limit Signs)	17406/00 ch 4630 (Glebe Road Jct)	780
				17406/00 ch 6500 (Access to House)	17406/00 ch 7375 (Local Road Jct)	875
52	A87	Invergarry		17400/00 ch 60 (Speed Limit Signs)	17400/15 ch 65 (Speed Limit Signs)	1235
53	A889	Dalwhinnie		12705/20 ch 145 (Opposite Hotel)	12705/20 ch 922 (Speed Limit Signs)	777
54	A9	Thurso & Scrabster		10515/50 ch 3905 (Speed Limit Signs)	10530/05 ch 225 (Janet Street)	460
				10530/05 ch 225 (Janet Street)	10530/11 ch 50 (Olrig Street, Thurso)	335

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
				10530/11 ch 50 (Olig Street, Thurso)	10535/05 ch 2140 (Ferry Terminal)	3170
55	A9	Helmsdale		10485/85 ch 1360 (Speed Limit Signs)	10489/10 ch 50 (End of Footway)	390
56	A9	Portgower		10485/55 ch 3180 (Start of Footway)	10485/75 ch 260 (End of Footway)	490
57	A9	Brora		10482/40 ch 3540 (Bus Stop)	10483/05 ch 430 (Gower Street)	500
				10483/05 ch 430 (Gower Street)	10483/50 ch 225 (Filling Station)	545
				10483/50 ch 225 (Filling Station)	10485/05 ch 45 (45m north of Clynelish Rd)	1100
58	A9	Golspie		10480/06 ch 4720 (Speed Limit Signs)	10480/65 ch 555 (War Memorial)	815
				10480/65 ch 555 (War Memorial)	10480/65 ch 1510 (Duke Street)	955
				10480/65 ch 1510 (Duke Street)	10482/05 ch 115 (Speed Limit Signs)	525
59	A99	Wick		10492/95 ch 5950 (Speed Limit Signs)	10492/96 ch 460 (West Banks Ave)	580
				10492/96 ch 460 (West Banks Avenue)	10492/96 ch 730 (End of Trunk Road)	270

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Location Number	Route	Location	Name of street/side of street to be treated	Details of Footway		Route Centreline Length (m)
				Start	Finish	Category A
60	A99	Lybster		10492/20 ch 1720 (Start of Footway)	10492/25 ch 155 (End of Footway)	335

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Attachment 6.11 De-icing Material Spread Rates

Table 6.11.1 – Decision Matrix for Winter Service

Road Surface Temperature	Predicted Road Conditions		
	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)		

Notes:

(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 forecast 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

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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.

Table 6.11.2 sets out the spread rates for precautionary treatments. Rate of spread for precautionary treatments should not be adjusted to take account of residual salt or surface moisture unless stated otherwise.

The rates in the table below are for precautionary salt treatment prior to snowfall that is essential to form a de-bonding layer and snow clearance.

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Table 6.11.2 – Treatment Matrix Spread Rates for Precautionary Treatments

Item	Forecast weather condition	Dry or damp road (grammes/square metre)	Road Surface Wet / Frost Susceptible / Surface Water Run-off Area (grammes/square metre)
1	RST higher than plus 1°C	0	0
2	RST lower than or equal to plus 1°C but higher than minus 2°C	10	20
3	RST lower than or equal to minus 2°C but higher than minus 5°C	15	30
4	RST lower than or equal to minus 5°C (or see TS alternative de-icer guidance)	30	40
5	Freezing Fog	Add 5 to Item 1 to 4 as applicable	Add 10 to Item 1 to 3 as applicable; otherwise as per item 4.
6	Freezing Rain	40	40
7	Snow Accumulations of any depth	40	40

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Table 6.11.3 – Precautionary Treatment Potassium Acetate Spreading Rates

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

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Table 6.11.4 – Snow or Ice Clearance Salt Spreading Rates

Road Surface Condition	Treatment				
	Spreading Salt (grammes/square metre)	Ploughing	Blowing	Alternative De-Icer	Ice Breaker
Ice Formed	40	No	No	Where Applicable	No
Snow covering of less than 30mm	40	Yes	No	No	No
Snow covering exceeds 30mm	40	Yes	No	No	No
Snow accumulations due to prolonged snowfall	40	Yes (continuous)	Where applicable	No	No
Hard packed snow/ice less than 20mm thick	40 (successive treatments)	No	No	No	Where applicable
Hard packed snow/ice	salt/abrasive (successive)	No	No	Yes	Yes

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Attachment 6.12 Snow Clearance

Table 6.12.1 Snow Clearance

Condition Criteria	Category A Patrol Routes		Non Category A Patrol Routes	
	Dual Carriageways & Motorways		Dual Carriageways	Dual Wide Single 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 reasonably practicable		Minimum number of lanes in each direction free from ice and snow as far as is reasonably practicable (Except where snow gates)	
Snow at any time	1	2	1	1
Following clearance of minimum lanes or the cessation of snow fall all lanes are to be clear of snow	3 hours	3 hours	3 hours	3 hours

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Table 6.12.2 Road Surface Wetness

Definition	Description	Water film thickness (for when using WFT instrumentation)
Dry Road	A road that shows no signs of water or dampness at the surface but may be just detectably darker. It may have moisture contained in pores below the surface that is not 'pumped' to the surface by traffic.	0 to 0.03mm (=0-30 g/m ²)
Damp Road	A road which is clearly dark but traffic does not generate any spray. This would be typical of a well-drained road when there has been no rainfall after 6 hours before the treatment time.	0.03 to 0.05mm (=30-50 g/m ²)
Wet Road	A road on which traffic produces fine spray but not small water droplets. This would be typical of a well-drained road when there has been rainfall up to 3 hours before the treatment time.	0.05 to 0.1mm (=50-100 g/m ²)
Very Wet Road and Flowing Water on Road	A road on which traffic produces droplets of water in the air to visibly flowing water on the surface	Greater than 0.1mm (=>100 g/m ²)

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Attachment 6.13 Salt Storage Facility

6.13.1 Specification for Salt Storage Facility

General

- All salt storage facilities subject to Director approval.
- It may be permissible to use existing depot provisions which are fit for purpose subject to Director approval.

Planning Requirements

- All planning, building and environmental regulations, appertaining to the facility, should be followed.

Design

- All buildings and storage structures must meet UK building design codes and be constructed of materials not subject to corrosion.
- The storage area must be large enough to contain the salt stockpile and provide room for vehicles to maneuver when unloading/ loading and maintaining the stockpile.
- Storage facility construction should be designed and specified by competent persons.

Site Conditions

- Salt stockpiles should be kept on a concrete or bituminous base strong enough to carry the weight of the salt and the loads imposed by the structure.
- Base to be sloped to allow water to drain away.
- Adequate drainage must be provided which meets environmental requirements/agreements.

Walls

- Salt stockpiles shall be enclosed on three sides with retaining walls.
- Retaining walls for stockpiles shall be impervious to water, mainly to prevent water entering but also they will help to maintain a more stable moisture content in dry conditions.
- All of the walls must be designed to withstand the maximum possible loads caused from salt stored against them and the dynamic forces from loading the salt.

Roof

- A structured roof shall be provided and there shall be no gaps between walls and the roof structure to eliminate salt spillage.

Safety

- For safety reasons the maximum stockpile height should not exceed the ability of the loader to push up salt from solid ground. All faces should be sloped to reduce the risk of collapse.