

Winter Resilience in an Unpredictable Climate

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INTRODUCTION



BEAR SCOTLAND



BEAR Scotland is an integrated service provider based and operating in Scotland. Formed by the alliance of leading consultancy, quarry products and construction organisations.

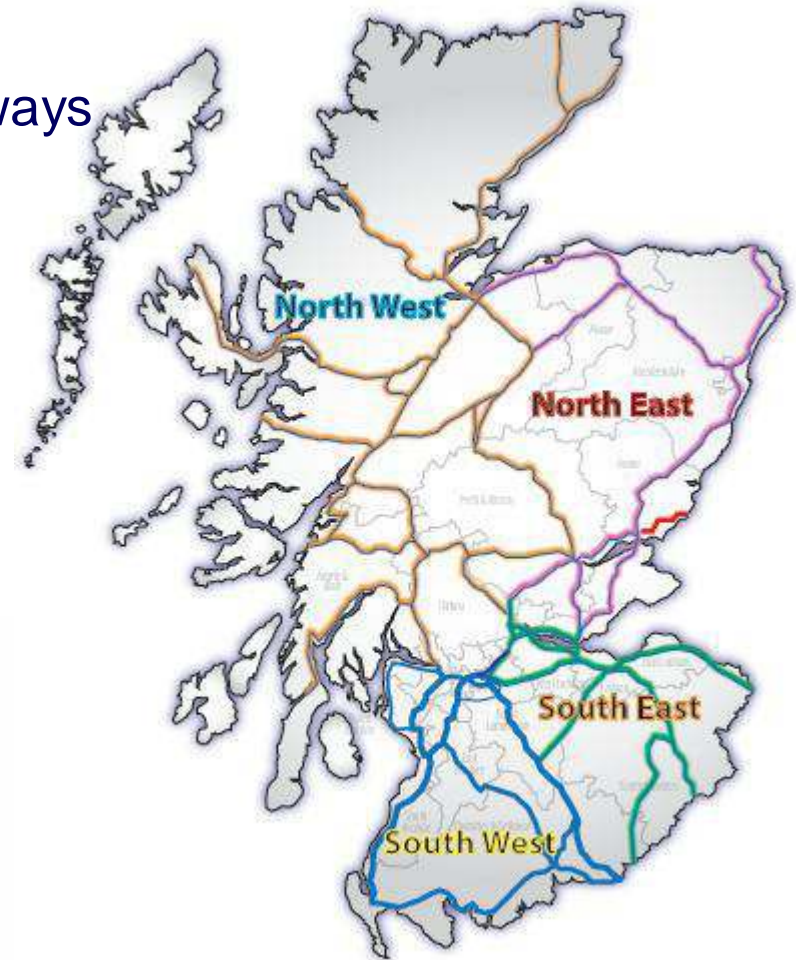


EUROVIA JACOBS®



SCOTTISH TRUNK ROAD WINTER MAINTENANCE

- 3218 km Motorway, dual & single carriageways
- Traffic Flows vary 1,000 – 90,000 veh/day
- Network Split into 4 geographical areas
- Winter 1 October – 15 May
- 79 Precautionary Treatment Routes
- 2 hour Pre-treatments with Pre-wetted salt



BEAR WINTER CAPABILITY – North East & South East

- 15 Winter Service Depots
- 32 Precautionary Treatments Routes
- 64 Front-line/ Snow Back up / Reserve Spreaders
- 15 Patrol Spreaders
- 5 Snow Blowers
- 6 Fastrac Tractors
- 200 Winter Service Drivers

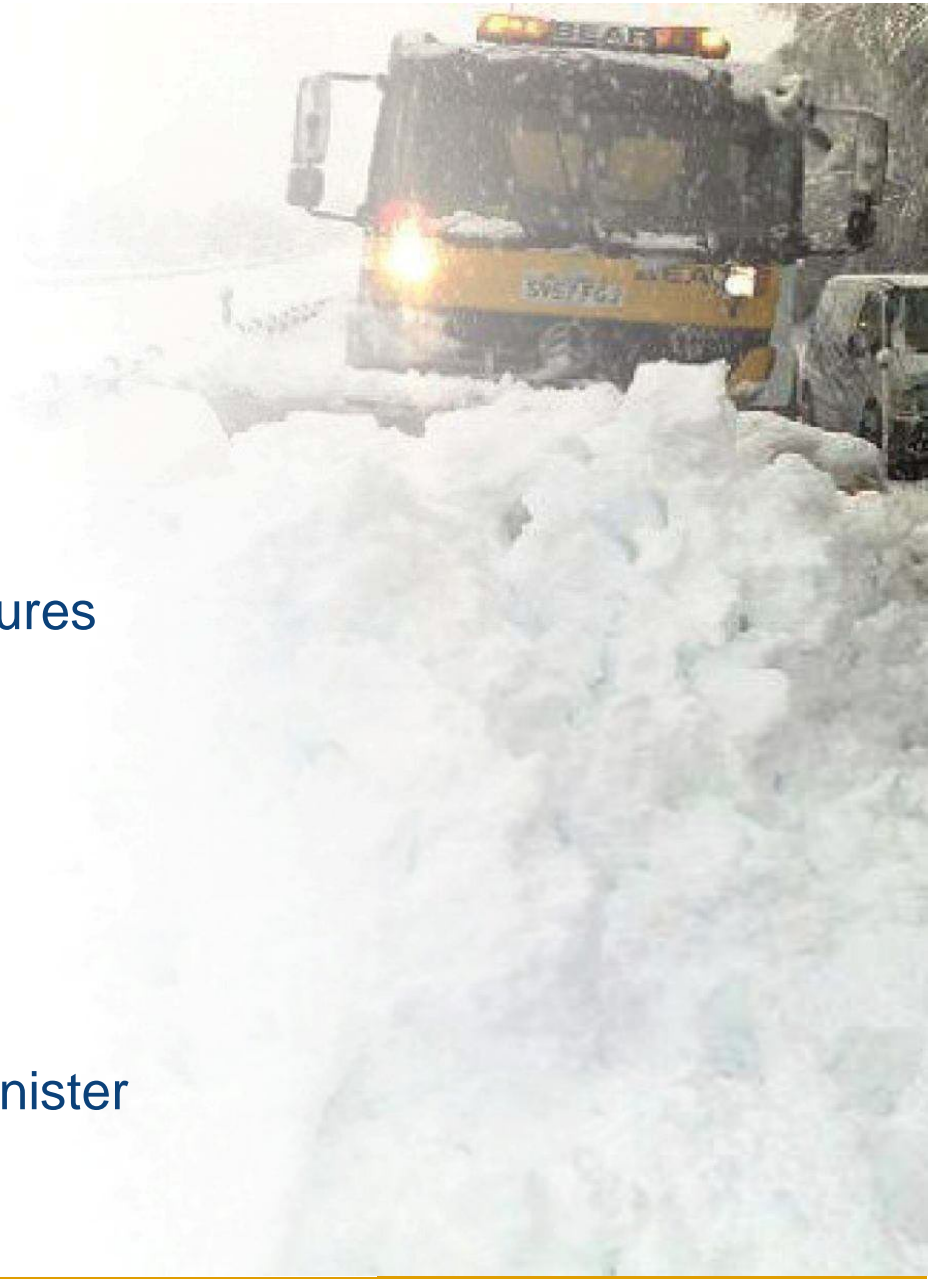


WINTER TRENDS– North East & South East

- pre-2008 Trend towards milder winters
5,500 pre-treatments – 32,000 tonnes salt
- 2008/09 Cold and some snow events, salt shortages
6,500 pre-treatments – 38,000 tonnes salt
- 2009/10 Cold and prolonged snow events, salt shortages
7,000 pre-treatments – 42,000 tonnes salt
- 2010/11 Extreme temperatures, salt shortages, prolonged snow
events and major disruption across Scotland
7,700 pre-treatments – 46,000 tonnes salt
- 2011/12 Mild winter, no real snow events however network
disruption with wind events
4,300 pre-treatments – 27,000 tonnes salt
- 2012/13 Cold with prolonged periods of low temperatures
8,700 per-treatments – 51,000 tonnes salt

WINTER CONDITIONS – 2010/2011

- Heaviest snowfall since 1960
- Coldest December on record
- Heavy snow in November
- Long periods of record low temperatures
- Salt Shortages
- HGVs losing traction on inclines
- M90 and A9 closed overnight
- M8 closed for 2 Days
- Resignation of Scottish Transport Minister



WINTER CONDITIONS

2010/2011



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IMMEDIATE ACTION

Operational 6 Point Plan



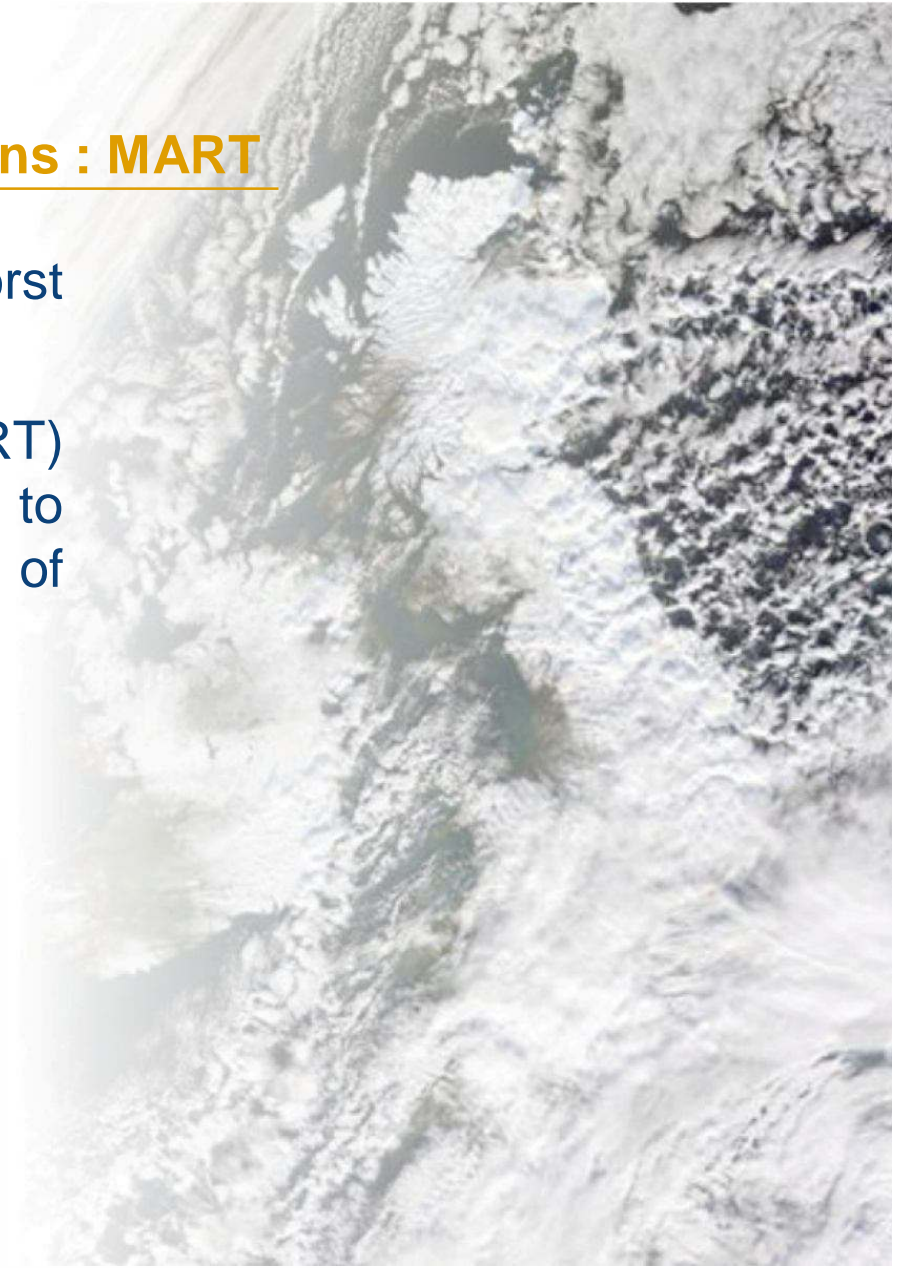
- Additional salt and grit at strategic locations
- Preset traffic management equipment to enable diversions
- Adapting landscaping plant for clearing snow
- Removing sections of barriers to allow easier access to stranded vehicles
- Stacking HGV's considered with Police in extreme circumstances
- Welfare kits in Incident Support Service (TRISS) vehicles

IMMEDIATE ACTION – Communications : MART

The winter of 2010/11 was the worst experienced in the UK for over 50 years.

A Multi-Agency Response Team (MART) was initiated in December 2010 due to significant disruption to all modes of transportation across the country.

- Transport Scotland
- Traffic Scotland
- Three Operating Companies
- Local Authority Representatives
- Met Office
- Scotrail
- Police



IMPROVED INFORMATION FOR DECISION MAKERS

- 12 additional winter patrol routes
- Additional Weather stations
- Additional Day/night cameras
- Daily winter action plans publicised on website



IMPROVED INFORMATION FOR DECISION MAKERS

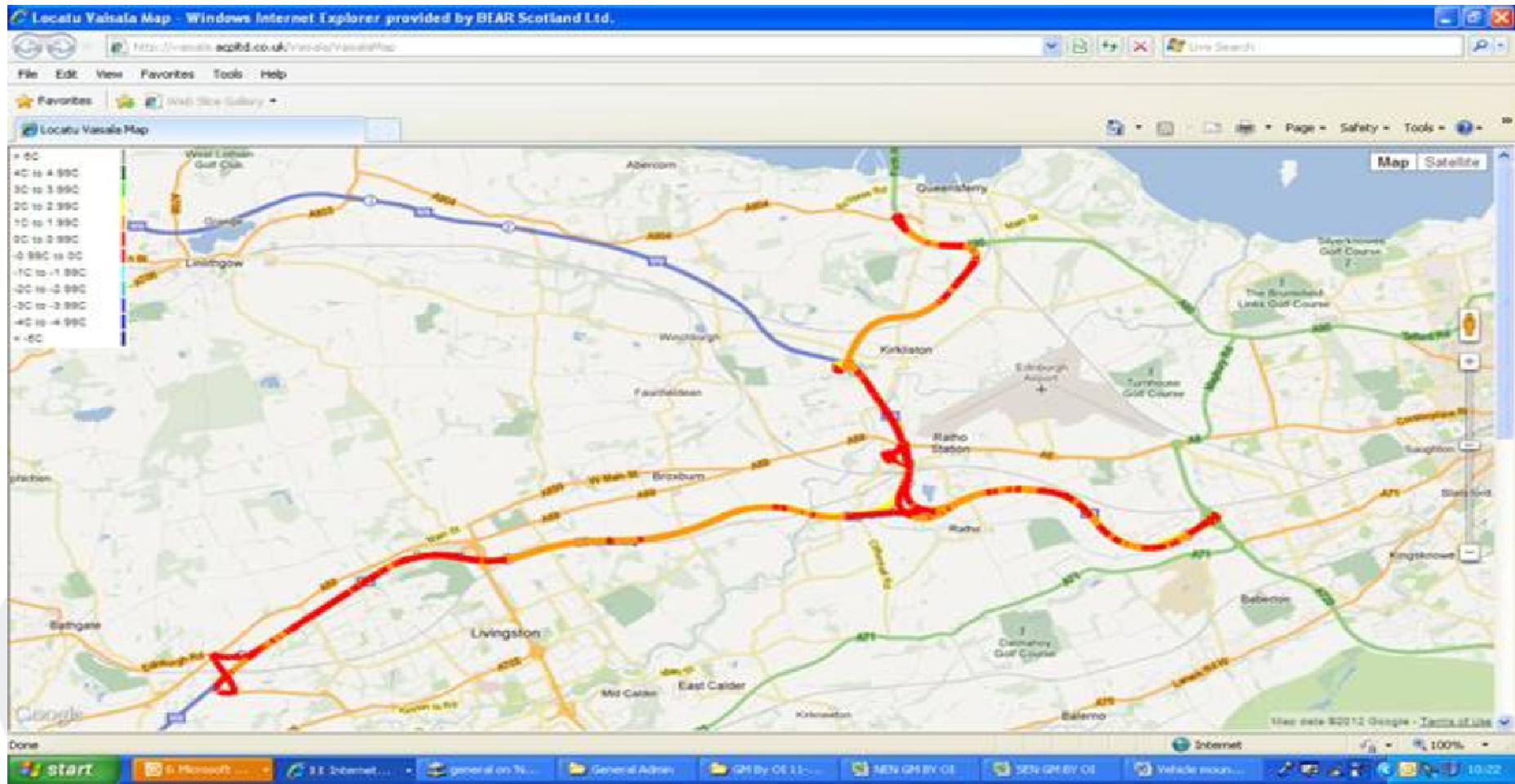
Sensors

- Fitted to all Patrol Spreaders
- Road surface and air temperatures taken every second
- Instant feedback to the driver
- Instant feedback to the Central Control Room through web based road weather information system



IMPROVED INFORMATION FOR DECISION MAKERS

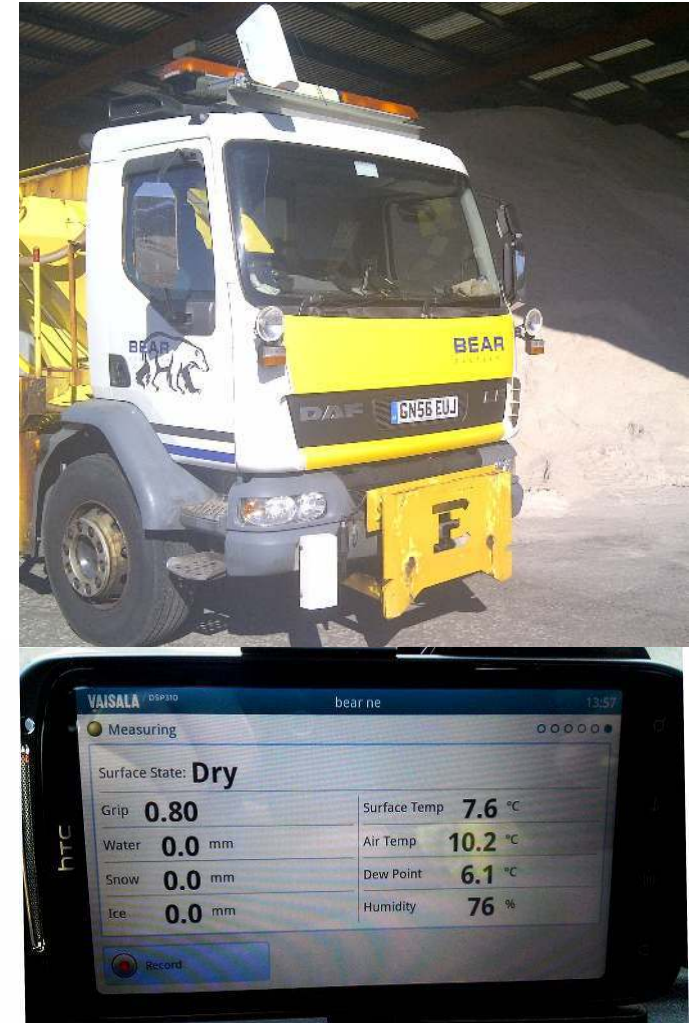
Vehicle Tracking – RST Trace



IMPROVED INFORMATION FOR DECISION MAKERS

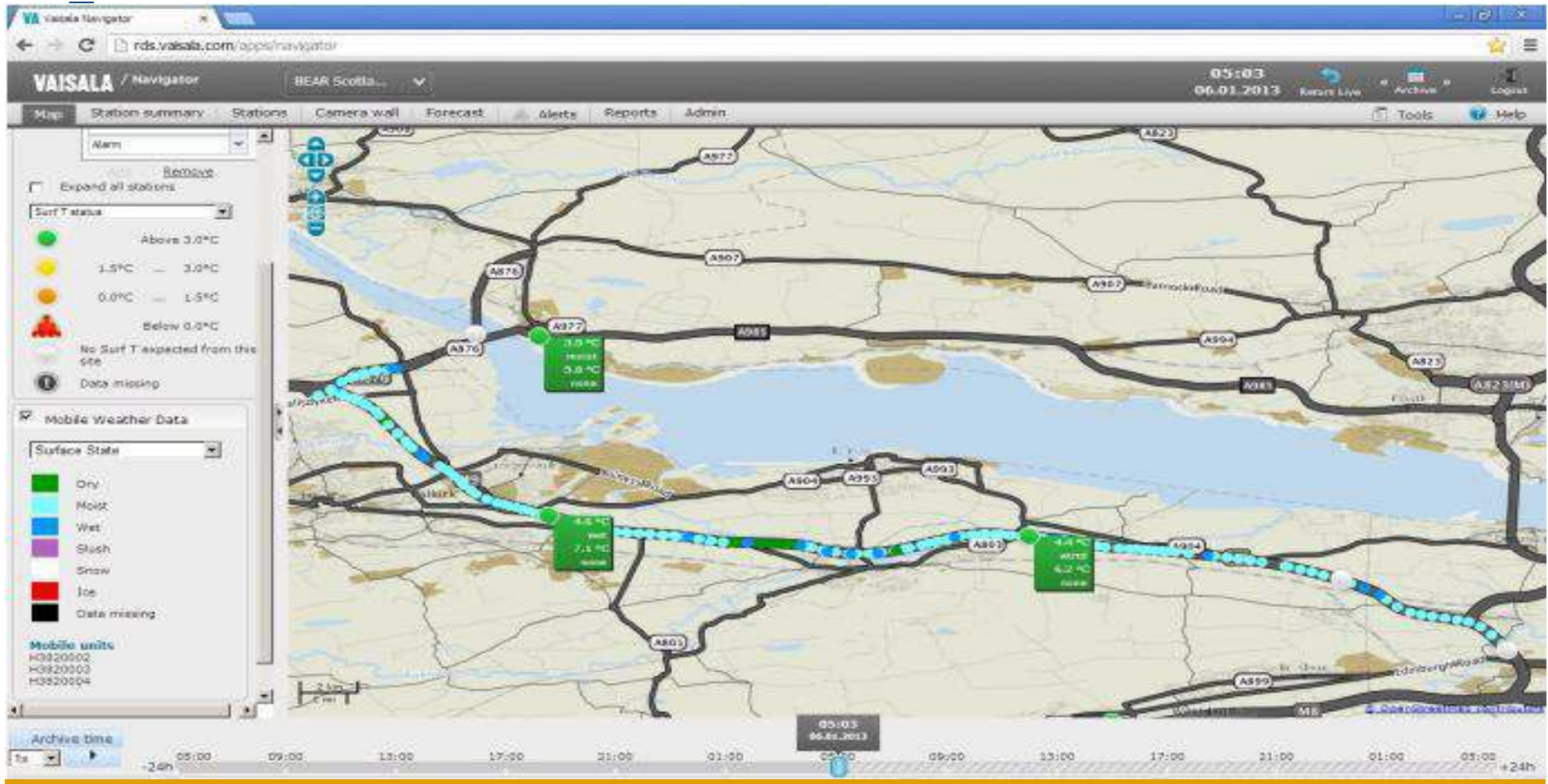
Vaisala Mobile Condition Sensors

- Fitted to 4 Patrol Spreaders
- Road Surface Condition, dry, wet, ice, as well as road surface and air temperatures taken every second
- Instant feedback to the driver
- Instant feedback to the Central Control Room through web based road weather information system



IMPROVED INFORMATION FOR DECISION MAKERS

Vehicle Tracking – Showing Condition Survey



IMPROVED INFORMATION FOR DECISION MAKERS

Live Camera Feed



BEAR

ADDITIONAL CAPABILITY

- 12 Additional Winter Patrols
- Icebreakers – 2no. Purchased
- Safety barrier team on standby “24/7” through winter period
- Liquid De-Icer
- Self-Help Kits for Footways
- Action Plan for Problem Inclines



ADDITIONAL CAPABILITY - Fastracs

- Six JCB FASTRACs with a variety of ploughs (Adjustable V-Blade, Fixed V-Blade, Straight Heavy Duty Ploughs)
- Two JCB FASTRACs will be equipped to spray liquid de-icer – 37,000 litres
- Training of JCB Fastracs drivers to assist HGVs that have lost traction
- Use of Walk Behind Mowers



ADDITIONAL CAPABILITY – Supply Chain & Collaboration

- Agreements with our supply chain for the provision of additional plant and labour resources
- Loading shovels, FASTRAC/tractors with ploughs, JCBs and tippers.
- Labour resources for clearing carriageways and footways.
- Ongoing liaison with 19 Local Authorities to agree mutual aid contacts at an operational and senior official level.
- Close communications with the Police to agree protocols for closing and re-opening routes during extreme weather

ADDITIONAL CAPABILITY – Salt Stocks

- Procurement of 120,000 tonnes of salt for Scotland
- Initial salt stock for 2011/12 - 32,000 tonnes
- Initial salt stock for 2012/13 - 45,000 tonnes
- Additional Resilience Salt Stores



COMMUNICATIONS

Warning Systems

A four stage warning system has been agreed with the Police, to ensure a consistent and proportionate message.

- Normal operations – no severe weather
- Travel with caution
- High risk of disruption for road journeys
- Avoid travelling on the roads



COMMUNICATIONS – Traffic Scotland Radio

- National bulletins 3 times an hour
- Regional 2 times an hour
- Latest Network conditions
- Updates on incidents, congestion roadworks, events and severe weather
- Other driving messages such as advice on driving in poor weather.

My Traffic Scotland

- Bookmarks
- What's Near Me?

Traffic Information

- Current Incidents
- Roadworks
- Planned Roadworks
- Journey Times
- Live Traffic Cameras
- Planned Events
- Park and Ride
- Variable Message Signs
- Weather
- Weather Stations

Freight

- Freight Information
- Freight News
- Freight What's Near Me?

Traffic Scotland Radio

Traffic Scotland Radio

The Traffic Scotland internet radio service provides frequent national traffic and travel information bulletins focussed on the strategic motorway and trunk road networks streamed over the internet. The service is available through the Traffic Scotland desktop and mobile websites as well as the joint Traveline Scotland/Traffic Scotland smartphone apps on iPhone, Android, Windows Phone and the latest BlackBerry platforms. Drivers are reminded not to use mobile phones or other devices whilst driving.

00:00 [Play] [Volume]

- National
- Highland and Western Isles
- Grampian
- Central, Tayside and Fife
- Strathclyde
- SW Scotland, Lothian and Borders

Latest Information

Traffic Scotland Radio provides regional and national broadcasts covering traffic and travel information across Scotland. The National broadcast is provided daily with three broadcasts an hour during peak times and two broadcast an hour during off peak. Regional broadcasts updated twice an hour during peak times and once an hour at all other times (Sunday to Friday).

Each National broadcast cycle is between 3-5 minutes in length and each regional feed is between 1-2 minutes in length. Both the national and regional feeds feature the following running order:

- Latest roads and public transport information
- Roadwork information
- Planned public transport changes
- Infomercials

During events such as extreme winter weather, national and regional broadcasts will be delivered with higher frequency and revised content.

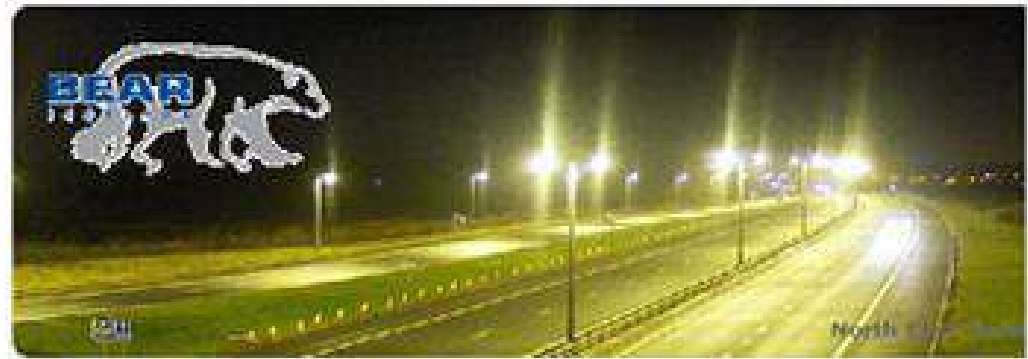
For live information visit the homepage.

COMMUNICATIONS – Service Information Centre

Will allow public to follow progress of spreader fleet

Will provide winter related information

Alert drivers to adverse conditions on route via Twitter



Winter Portal

Winter Portal Clearing Snow & Ice FAQs Winter Driving Fast Facts

Latest Winter Updates
There is no news at this time.
Please check back later.

 BEAR Scotland
BEAR Scotland Friday 04th 1000hrs - Monday 17th 0600hrs. M80 Denny S&B resurfacing. Southbound carriageway closed, Northbound in operation.
Travel up - may affect route

BEAR Scotland Mon 10th - Thurs 13th Oct. A90 North of Siggat, resurfacing night works. Closed between Skirling and Melrose junction. Div via A92/A97.
Travel up - may affect route

BEAR Scotland A30 Eskbank Bridge - In addition, drainage and repaving works at the bridge are ongoing.
Travel up - may affect route

mainstream tracking map

A map of Scotland showing the locations of BEAR operations. Green circular markers are placed on various roads across the country, indicating where snow clearing or maintenance is taking place. The map includes major cities like Glasgow, Edinburgh, and Aberdeen, and shows the network of roads.

COMMUNICATIONS – Service Information Centre

Will allow public to follow progress of spreader fleet

Will provide winter related information

Alert drivers to adverse conditions on route via Twitter



CONTINUED INVESTMENT

- 4th Generation Contracts
 - 40g Treatment in 2 hours
 - Increased Patrols
 - More Footway Treatments
- Winter Training DVD
- Liquid De-Icer Sprayer
- Vaisala Mobile Surface Condition Sensor



SUMMARY

