

CIHT NW Region Conference Old Trafford Manchester

16th November 2023

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Past President and Consultant
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Introduction

National Winter Services Research Group

- Established in 1980s to further research in Winter Services
- Following Quarmby Report in 2010 given greater responsibility
- NWSRG Steering Group is now a Technical Sub-Group of the UK Roads Board.

Governance and Structure



Membership

There is no fee to join the NWSRG as a member.

Requests to join the Steering Group will be made the Steering Group for consideration.

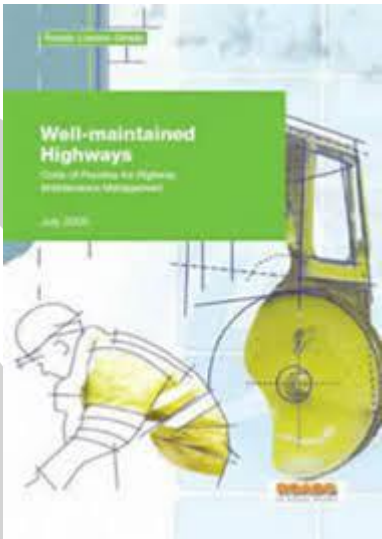
Requests to join the Associate Group will be made to the Associate Group for consideration.



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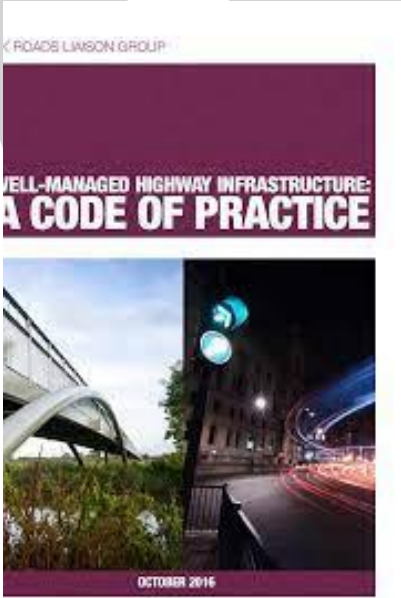
Guidance documents

- Originally part of Well-maintained Highways



Recommended spread rates - dry salting (g / m ²)				
Road surface temperature (RST) when frost/ice is predicted	Spreader capability			
	Fair		Good	
	Dry/Damp Road	Wet Road	Dry/Damp Road	Wet Road
At or above -1.0°C	8	8	8	8
-1.1°C to -2.0°C	8	11	8	8
-2.1°C to -3.0°C	9	17	8	13
-3.1°C to -4.0°C	12	23	9	17
-4.1°C to -5.0°C	14	28	11	21
-5.1°C to -7.0°C	20	39	15	30
-7.1°C to -10.0°C	27	54	20	40
-10.1°C to -15.0°C	38	75	28	56

An example of the proposed NWSRG spread rate tables for the new guidance, showing its simplified form but to be used in conjunction with the notes and guidance as a whole



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Section One

Foreword and using the NWSRG
Practical Guide for Winter Service

March 2021

In association with  INSTITUTE OF
HIGHWAY
ENGINEERS



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Guidance Section	Contents
1. Foreword and Using the Guide	Information on the basis and status of the Guide along with information on its layout and use
2. Planning	Guidance to help authorities review their current policies and practices and provide ease of reference to relevant information within other sections of the Guide.
3. De-icer Types	Guidance on the types of de-icer available, how de-icers work and the key factors that affect de-icer performance, storage requirements with environmental and infrastructure considerations.
4. Treatment Methods	Guidance on how de-icers can be applied and the key factors to consider in deciding the most suitable options for local circumstances.
5. Salt Storage	Guidance on the storage and monitoring requirements to enable salt to be maintained in good condition.
6. Spreader Management	Guidance on the important elements of the calibration procedure, practical guidance on how to carry this out and monitoring performance after calibration.
7. Decision Making	Guidance to support decisions relating to treatment actions.
8. Precautionary Salt Spreading Rates	Guidance on the key factors that affect precautionary spread rates and how to determine appropriate rates for local circumstances.
9. Treatments for Snow and Ice	Guidance on how to carry out treatments before, during and after snow and ice, including spread rates, ploughing equipment and practices.
10. Treatments for Extreme Cold	Guidance on the types of de-icer suitable for treatments in extreme cold, storage requirements, spread rates and treatment strategies, environmental and infrastructure considerations.
11. Footways and Cycleways	Guidance on the selection and prioritisation of footways and cycleways for treatment, types of de-icer and spreading equipment, and the use of weather forecasting and station data to aid treatment decision making.
12. Weather Forecasting and Road Weather Information Systems	Guidance on requirements for weather forecasting and road weather information systems.
13. Route Selection and Optimisation	Guidance on applying a risk-based approach to select routes (carriageways, footways and cycleways)

Objectives Short Term (2023-4)

Widen the scope of membership to include organisations who are delivering on the ground winter service throughout the UK

Develop a research programme to inform future practical guidance sections and/or updates

Enhance engagement with all Local, Regional and International Highway and Road Authorities

Increase the level of membership by raising the profile of the NWSRG



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Objectives Medium Term (2023)

Undertake priority research projects with clear objectives and benefits for our members

Improve efficiency and optimise winter service for our members through collaborative research and knowledge transfer

Provide a peer review service to help disseminate best practice and advise in the delivery of winter



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Objectives Long Term (2025+)

Deliver our research programme to improve winter service through updates to and development of new practical guidance and training

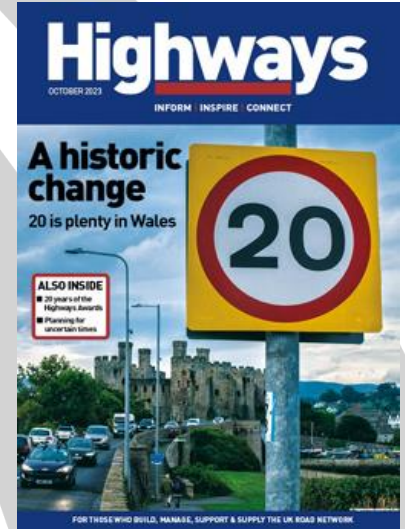
Develop our website to become a compendium of knowledge for our members

Expand the scope of our service to include all severe weather types to mitigate the effects of climate change



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NWSRG involvement across the Highways Sector



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PATHWAYS TO GOOD SERVICE

Recognise different approach across UK

Allow LAs to risk assess local service standards

Educate on new technologies

Feedback on existing legal challenges



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Research priorities 2023+

Residual salt

Treatments in low traffic areas

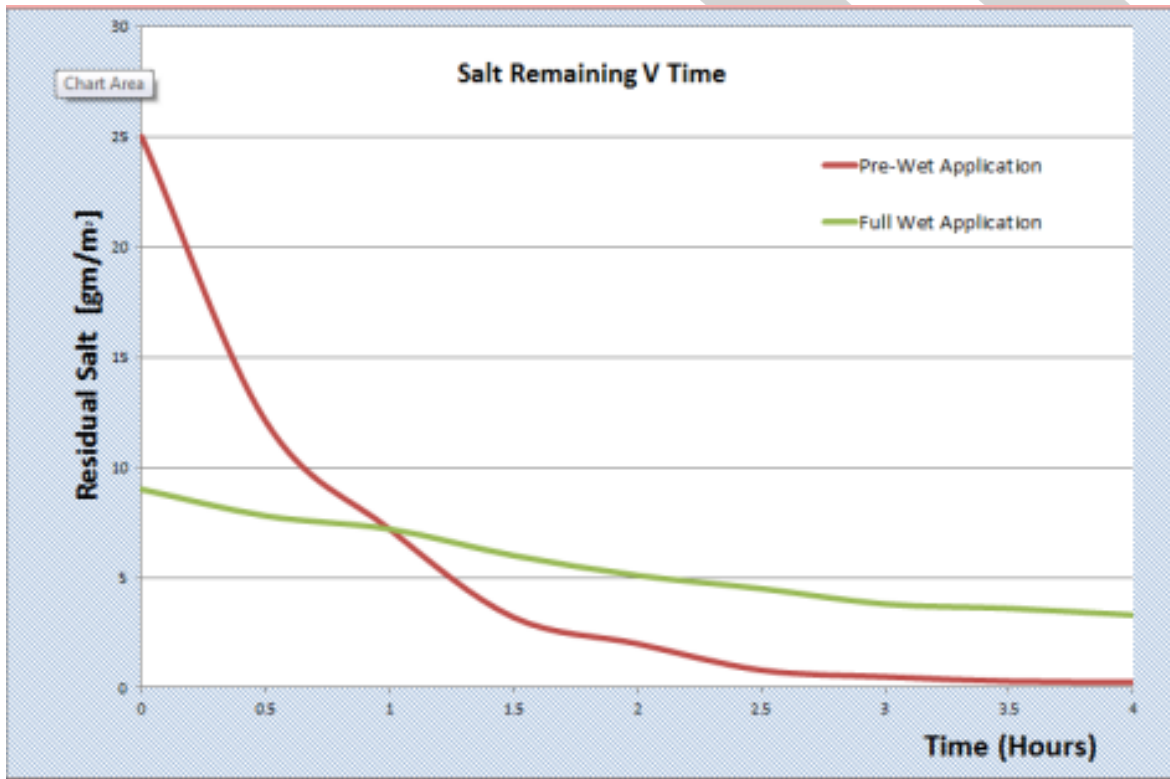
Carbon reduction and sustainability

Sensor data

Dynamic salting



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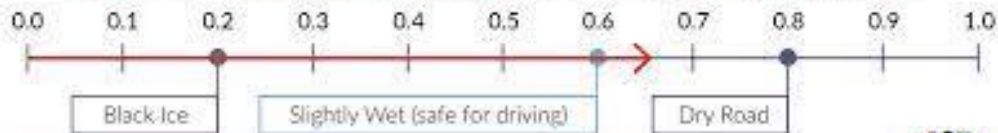


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WINTER PAVEMENT FRICTION SCALE

Ice Slicer restores safe roads hours faster than any other granular deicer





Thermal Mapping

- Across a highway network in winter some sections will be warmer or colder than others
- Thermal Mapping identifies where these warm and cold sections are going to occur
- Road pavement temperature data are collected automatically every 5' under a range of different weather types



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Thank you for your time

Any questions please contact

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