NWSRG
NATIONAL WINTER SERVICE RESEARCH GROUP

Derby City Council

MHA
Midlands Highway Alliance Plus

Welcome, Derby, to the Winter Service Roadshow

Dedicated to advancing understanding of best practice for winter service delivery

Introduction

- Welcome from the organising committee
- What is the NWSRG TAG?
- Aims & objectives of the roadshow
- ‘Safe space’ environment encouraging dialogue
- Housekeeping for the day
- The agenda……..

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MHA+ Overview

Kully Boden

Dedicated to advancing understanding of best practice for winter service delivery

MHA+

MHA+ is an Independent Collaborative Alliance

✓ 38 members (25% England's local highway authorities, 2 Combined Authorities)

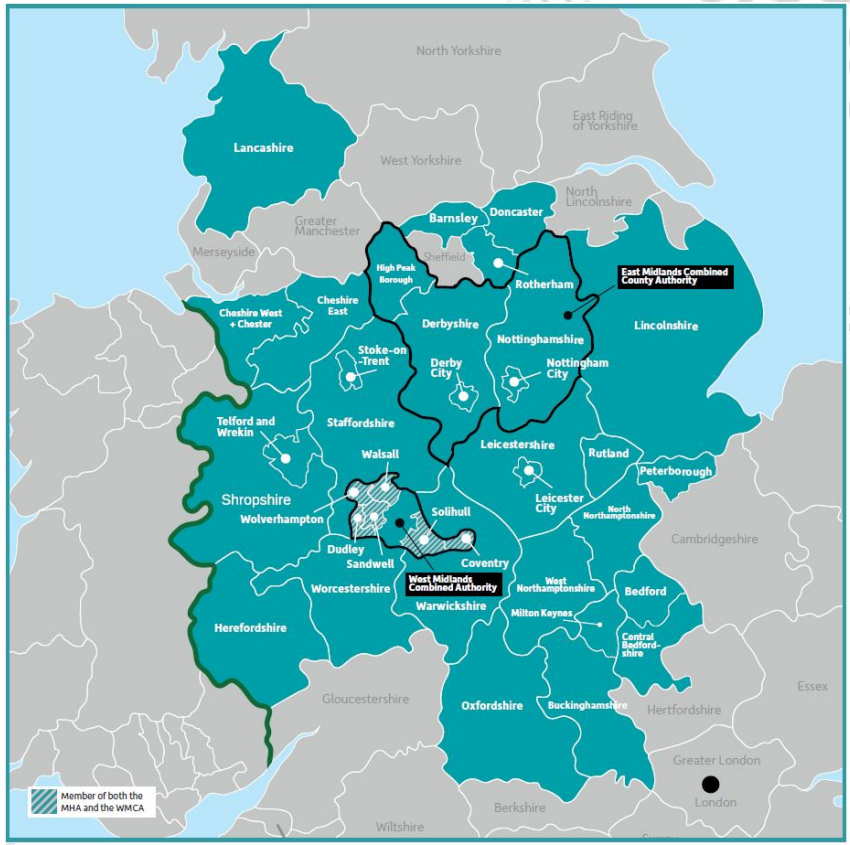
✓ 16 Service Improvement Groups,700+ members

✓ 2 procurement frameworks:
- Professional Services
- Medium Schemes

✓ Shared skills & development incl. free training

✓ 3 Collaboration themes, clients & suppliers:
- Social Value
- Resilience, Efficiencies & Carbon
- Digital Working

https://www.mhaplus.org.uk/



Vision: An independent collaborative alliance that supports its member authorities to deliver effective, efficient, innovative, sustainable, and customer-focused highway services.

Aim to provide:

- ✓ One united voice for our members
- ✓ A community of best practice
- ✓ Collaboratively procured delivery frameworks

Not for profit – any profits used to support:

- ✓ free training and annual event
- ✓ collaborative working projects

Member of the National Association of Construction frameworks

Governed by our members for our members

National Association Construction Frameworks
Serving the Public Sector

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Ice Melter

Paddy Hastie

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❄ The Ice Melter

👋 Introduce yourselves

Your name, organisation, and years in winter service

🚛 Name your gritter

Agree a team name — best name wins a prize

📋 Discuss your table's task

10 minutes — answers on your table card

Feeding Back

Each table has 3 minutes. Your spokesperson should:

1. Announce your gritter name
2. How many years of combined winter service experience is at your table?
3. Take a guess, is the next table Higher or Lower?
4. Share your table's answer to the task

Best gritter name wins a prize

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Active Travel Workshop

Dedicated to advancing understanding of best practice for winter service delivery

Today's Route

90 minutes. Four stages. One destination: better winter maintenance of active travel routes.

On Yer Bike

The path ahead isn't as clear as it should be…

- Active travel networks have grown rapidly. CAPEX built the routes, OPEX hasn't kept up.
- Winter service teams are not always consulted during scheme design, leading to challenging a maintenance burden.
- Legal duty is a grey area, but as political priority grows, that grey area is narrowing.
- Carriageway winter service tools and technology may need some adjustment if deployed onto active travel routes.
- User expectations are high, politically visible, and route mapping is often.

Stage 1 — The Mountains

⏱ 10 minutes to discuss, then brief feedback from each table

1. What active travel routes do you currently maintain in winter — and what is the biggest challenge you face?

2. What barriers (physical or otherwise) stop you treating them as effectively as you'd like?

Stage 2 — Pedal to the Metal

⏱ 10 minutes to discuss, then brief feedback from each table

1. What are you or others already doing that works — even if it's a workaround rather than a proper solution?

2. What is the one thing you wish you'd known before your first winter maintaining active travel routes?

🏆 Stage 3 — The Breakaway

⏱️ 10 minutes to discuss, then brief feedback from each table

1. What would make the biggest practical difference to your authority — funding, guidance, equipment, or something else?

2. What further research should NWSRG need to carry out on this topic to better support authorities like yours?

🏁 Stage 4 — The Finish Line

⏱ ? minutes to discuss

- Where do you agree across authorities — and where does the route diverge?
- What is the single most urgent issue this room wants NWSRG to act on?
- What has no-one mentioned?
- What does a well-maintained active travel network look like in winter — and how far are we from it?

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Lunch & Networking
12:30pm – 1:20pm

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Extending the Horizon

From fragmented winter data to cohesive, efficient network intelligence

Michael Wall, Vaisala Ltd

Dedicated to advancing understanding of best practice for winter service delivery

Topics for discussion

- How to confidently take a risk-based approach to winter decision making
- How confidence in decision-making can drive continuous improvement
- Practical experiences from three local authorities

Winter operations reality

- Complex networks that are always under pressure
- Budget, CO_2 and safety scrutiny on every decision
- Limited network-wide visibility of actual road conditions

Winter operations reality

Derby City Council

272km treated, 35% of highway network, with 4 routes

Compact but highly varied network, tight urban corridors, open rural roads, high priority bus routes that demand precise timing and confidence in treatment decisions

Liquid de-icing city centre hospital entrance & Pride Park

Brent

Small, urban, London network of 216km with 5 large gritters and an adopted highway network of 469.5km

Demographics of the area and a yearly 30% churn of the population often leads to inconsistent reporting and communication of incident severity

Cumberland Council

Large, predominantly rural network in north of England

Significant variations in topography:

Lake District
Exposed Coastal Routes
Urban / city settings

Challenge to provide a consistent, targeted approach suited to these different environments

- Three very different environments, but all are striving for the same goal

- The confidence to take a risk-based approach to decision-making

Derby City

- Charlie Breden – Senior Technician, Network Management
  - 2025/26 was Charlie's first year leading the winter service

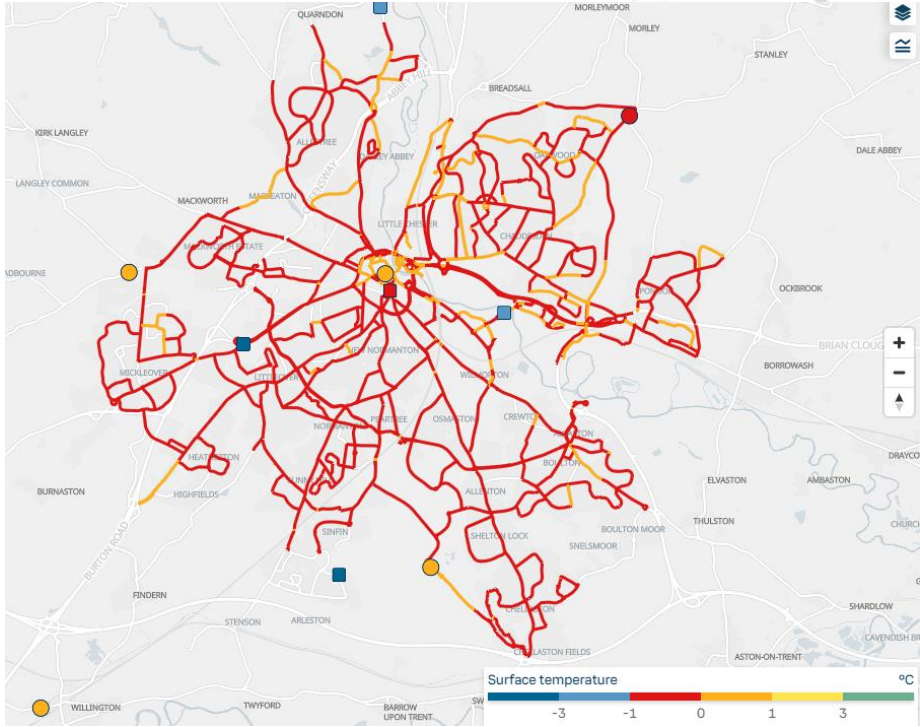
- Challenges:
  - Fragmented nature of the data used to make decisions
    - Data from multiple sources
    - Inconsistent formats
    - Limited real-time insight into actual road conditions

Derby City

- Historically Derby's only point of observation reference on their network was a single weather station located at Morley Road
- Not representative of the more densely urbanised City Centre, nor the more rural outskirts
- Supplementary observations were added via the inclusion of a number of battery-powered NB-IoT sensors around the City

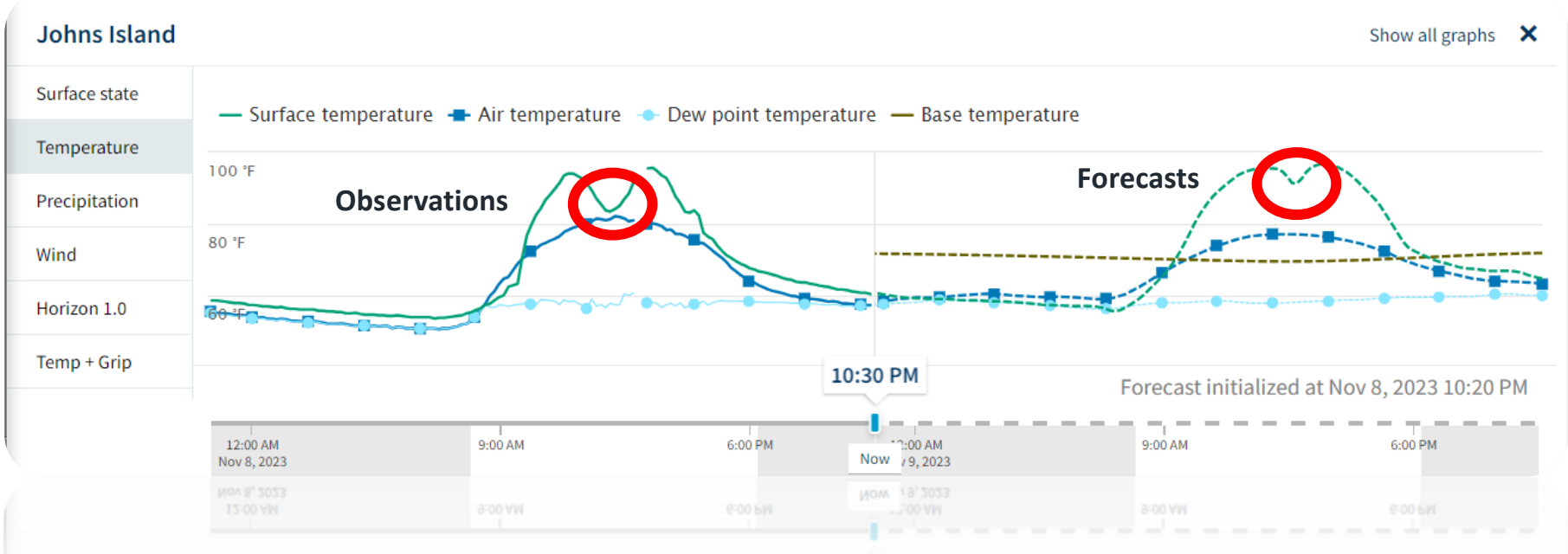
Derby City

- Expanded observation network further enhanced by Network-Wide Assessment
  - Provides 72-hour network forecasts of RST, surface state and Grip
- Single platform allows Derby to see everything in one place
- Enhanced sensor data, Network-Wide Assessment and clearer decision support tools enable Derby to justify their actions and adapt treatments
- *“It’s given us a more accurate picture of what’s happening across the network rather than relying on assumptions”*



Sensor data demonstrably improve the forecast

Intelligent forecasting utilizes observations to deliver increased hyper-local accuracy, improving confidence for targeting treatments

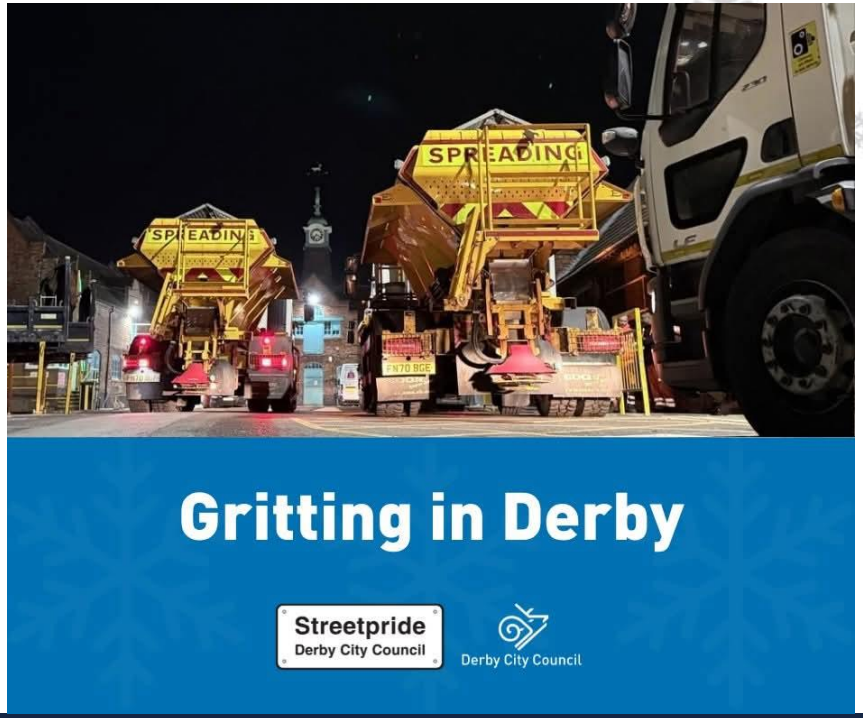


Increasing confidence drives continuous improvement

New this Winter!

- Increased confidence in the decision support tools
- Supports shift from 1C to 0C mobilization threshold

- Aligns with neighbouring County roads
- Cold routes no longer needed
  - Reduces standby costs
  - Reduces complexity



London Borough of Brent

- Previous winter decision making rationale was based upon purely modelled forecast data supplemented by local knowledge and experience
- Need for greater certainty on marginal nights
  - To avoid unnecessary turnouts
  - Reduce over treatment & costs (pay as you treat model)
- Brent believed they knew where their points of concern “coldest spots” were located, but had no objective proof
  - Decided to validate these locations with observations in order to provide greater confidence and better defense
- Pressure to treat footways, lack of resources
  - Treat major shopping areas, outside transport hubs & school entrances
  - Under Severe Weather street cleansing operations are suspended, resources used for salt spreading in town centres

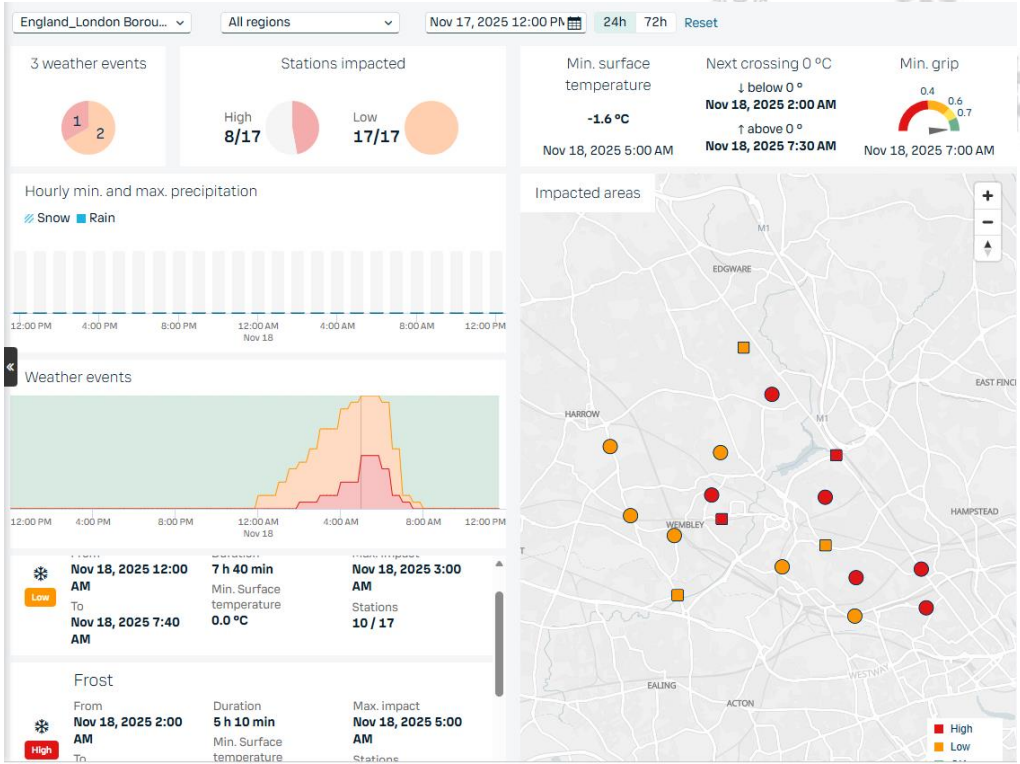
London Borough of Brent

- Solution:
  - Installation of 12 Xcast (battery powered, NB-IoT comms) sensors across the network
  - Sensors integrated into Vaisala's Xweather Horizon platform
  - 72-hour site-specific forecasts generated for all sensor locations at 10-minute intervals
  - Continuous model correction from live sensor data

- Outcomes:
  - Sensor installation and Xweather Horizon rollout has given Brent a firmer, integrated platform from which to make more informed decisions
  - Installation of sensor on dedicated cycle track quantifies the balance between limited heat generated from bicycles versus urban heat island impact
  - *“Greater certainty of marginal nights compared to previous modelling only, giving greater confidence and resilience”*

London Borough of Brent

- Snapshot from 12:00 on 17th November 2025
- 24-hour outlook suggests an overnight adverse weather event
- However, the impact of this event was not predicted to be felt equally across the Borough
- Allowed for more nuanced / targeted deployment of resources
- Regular forecast updates allowed decision to be reviewed & refined should conditions change



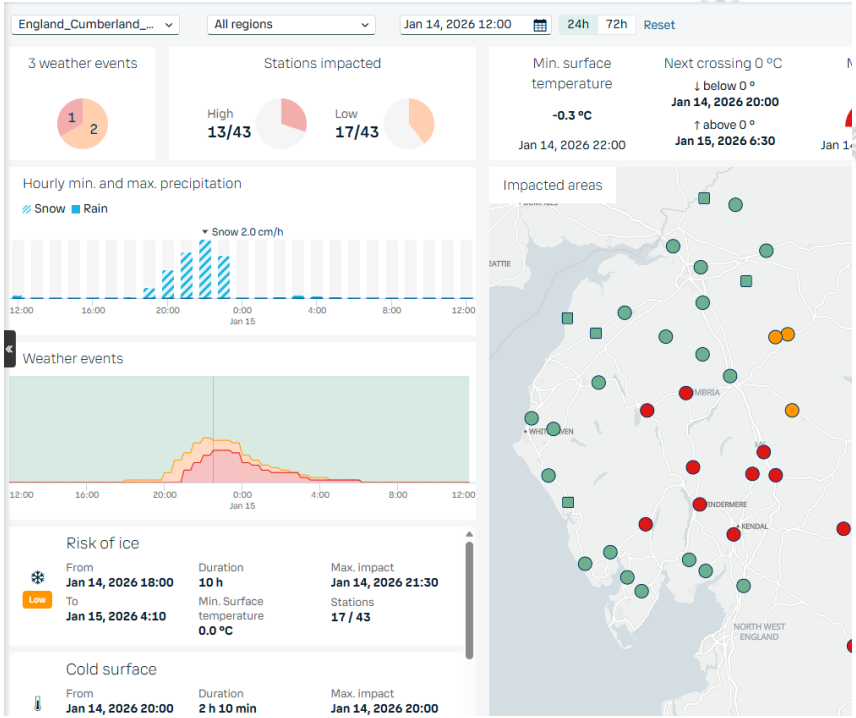
Cumberland

- Requirement for a weather forecasting and ice prediction solution that could offer flexibility and support a risk-based approach to decision making in a highly challenging and variable environment
- Aim was to provide essential winter cover while helping to save costs and minimise the environmental impact caused by over-treatment
- Observation clarity provided via network of weather stations
- Personalized weather events based upon Cumberlands policy thresholds were configured in Vaisala Xweather Horizon platform

Cumberland

- Xweather Horizon Dashboard provides a *“strong overall view of the network and how weather events are impacting the wider area”*

- *“Using the site graphs as a guide has given us a much clearer understanding of timings and site-specific conditions, with regular updates. This has allowed us to fine-tune decision-making in real time, making decisions when they are needed”*



With thanks to

Derby City Council

- **Charlie Breden** I Senior Technician - Network Management
  Derby City Council

Brent

- **Mark O'Brien** I Senior Neighbourhood Manager
  London Borough of Brent

Cumberland Council

- **Mark Wilson** | Highways Local Area Network Manager
  Cumberland Council

What have you done differently this winter to extend your operational horizon?

- What is your call-to action treatment threshold?
- Is monitoring, measuring and reducing your carbon impact important?

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Thank you

Any questions?

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Are You Legally Ready for Winter?

Ian Quayle

Dedicated to advancing understanding of best practice for winter service delivery

COLD WEATHER AND WINTER HIGHWAY MANAGEMENT ISSUES

INTRODUCTION

The purpose of todays training is:

- To remind practitioners of the relevant law.
- To explore the court process.
- To examine the gathering and compiling of evidence.
- Examine the creation and use of witness statements.
- Provide guidance as to how evidence is to be given.

INCIDENT 1

- A two-vehicle accident arising from a vehicle skidding on ice , colliding with another vehicle and crashing into a barrier.

- The road is a major road into Newtown with a thirty-mile speed limit.

ISSUES

- Areas of potential liability.
- The Highways Act 1980.
- The tort of negligence.
- Who is liable?

WHO COULD BE LIABLE?

- Driver of red car
- Driver of silver car
- Highway Authority
- Liable for what? Loss or damage resulting from negligence that is not too remote (in other words that was foreseeable).

INCIDENT 2

- Mary was walking to work at a local hospital on a public footpath when she slipped on ice.

- Liable for what – personal injury and loss or damage that is not too remote.

WHO COULD BE LIABLE?

- Mary – contributory negligence.
- The adjoining land or homeowner – negligence or liability under Occupiers Liability Act 1957.
- The Highway Authority – Highways Act 1980 , tort of negligence.

£
Resources
Highways Act 1980
Liability in negligence
Duties

DUTIES

RELEVANT LAW – SECTION 41 HIGHWAYS ACT 1980

1. The authority who are for the time being the highway authority for a highway maintainable at the public expense are under a duty, subject to sub-section (2) and (4) below, to maintain the highway.

   (1A) In particular, a highway authority are under a duty to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice."

This is absolute duty on the Highway Authority, subject only to a defence of reasonable practicability – the burden of which is invariably onerous.

CAN WE DISMANTLE SECTION 41(1A)

1. The amended subsection is plainly an extension of Section 41(1) which provides (1)The authority who are for the time being the highway authority for a highway maintainable at the public expense are under a duty, subject to subsections (2) and (4) below, to maintain the highway. The use of the words “In particular” make this plain.

- Since Section 41(1) is subject to the statutory defence within Section 58, the incorporation of the words “so far as is reasonably practicable” needs interpretation and is an area that may give rise to difficulty in future – indeed it is far from easy to see how a section 58 defence could be left to the Authority if they failed to show they had taken reasonably practicable steps.

- Assuming that the courts adopt the same approach as that taken in Employer’s Liability cases, the burden of proving the defence will rest on the Defendant – see Larner -v- British Steel [1993] 4 All ER 102 and Baker v Quantum Clothing [2009] PIQR P19.

- Further, “reasonably practicable” means more than physically possible and involves a computation of risk against sacrifice – see Austin Rover Group v HM Inspector of Factories [1990] 1 AC 619. If the same analysis is to be applied to section 41(1A) then it would be for the Authority to show that it had acted in a reasonable and practicable way to meet the risk and not for the Claimant to establish that measures were insufficient or delayed. This burden, involving proof not only of appropriate systems for safety but also their application and discharge, is evidentially cumbersome and will require careful marshalling of evidence to ensure the defence is made out.

THE RESULT IS?

- A Claimant will have to show little more than that s/he slipped on ice, or at least on a road where safe passage was rendered dangerous by the presence of ice.

- In order to move the burden to the Highway Authority to prove their systems were reasonable and practicable.

- And were being discharged at the time of the accident.

PRACTICAL CONSEQUENCES

- A claimant might consider that they need prove only the fact of their accident, and that it was caused by ice, to establish a prima facie case. a Claimant will need evidence of what occurred to make him/her fall.

- Any evidence of shortcomings on the part of the Highway Authority will strengthen the claimant's case.

- A highway authority ought to prepare their defence on the basis that they:

a) Will have to discharge the burden of showing that it was not reasonably practicable to keep that highway clear of snow and ice

b) And/or justify their winter maintenance policies., A defendant's evidence will need to be directed towards the weather conditions and the warning of them, the winter safety policy, including hierarchies of gritting/salting, the steps actually taken and may extend to budgetary considerations (if a council runs out of grit, for instance:

   i. It might be acceptable to show that the budgetary provision was a reasonable one but that weather conditions were exceptional).

HIGHWAY AUTHORITY EVIDENCE

Where the claimant can establish that s/he has suffered an injury due to the presence of ice or snow on a highway maintainable at public expense what evidence should be made available by the Highway Authority:

- The Winter Safety Plan or comparable policy document.
- Any applicable generic document of guidance such as a general Code of Practice, with which it can be shown the Safety Plan is compliant.
- Evidence of the gritting/salting programme intended to be implemented (if separate to the safety plan).
- Weather reports (which should be available from the Met. Office).
- Records of the gritting/salting in fact undertaken during the cold period.

HIGHWAY AUTHORITY EVIDENCE

As the duty imposed on the Highway Authority is to ensure safe passage both claimant and defendant need to consider:

- The Highway Authority policy for dealing with icy conditions. The policy should be compared to any relevant general Code of Practice for Winter Maintenance and compliance or non-compliance identified (with an explanation relating to the latter).

- To the extent that a hierarchy of preventative measures is adopted, the reason for adopting such a hierarchy will need to be considered in cases where they come into play.

- Relevant budgetary constraints could be identified (and the Court is usually live to the reality that local authority resources are finite and have to be managed prudently). An obvious point is that carriageways will be salted and gritted before footpaths but, to the extent that cold conditions persist, it may not be the case that a highway authority can simply neglect to salt pavements altogether. It will be necessary for the Highway Authority to show that it has considered the matter and formulated a proper policy- a failure to do so opens a door to a Claimant.
- This may require an explanation as to why some roads were gritted first perhaps by reference to bus routes, traffic usage or geography - a steep hill needing more by way of care, perhaps, than a flat road.

HIGHWAY AUTHORITY EVIDENCE

- Information concerning resources.
- Year on year budget analysis.
- Funding for plant, equipment and machines.
- Staffing levels.
- The extent of highways, pavements and active travel routes.
- Methods for prioritization.
- Policy reviews.

HIGHWAY AUTHORITY EVIDENCE

WHAT IS REASONABLE IN ALL THE CIRCUMSTANCES

THE DEFENCE UNDER SECTION 58 HIGHWAYS ACT 1980

- The Section 58 defence is differently worded and provides:

"It is a defence…… to prove that the authority had taken such care as in all the circumstances was reasonably required to secure that the part of the highway to which the action relates was not dangerous for traffic."

The absence of the word "practicable" arguably makes the Section 58 defence easier to discharge and requires an authority to show that it had taken reasonable care to ensure that the highway was not dangerous – not that they had done all they could within the limits of reason.

THE DEFENCE UNDER SECTION 58 HIGHWAYS ACT 1980

- The discharge of a defence of reasonable practicability, however, depends not only upon establishing a proper policy, but also that the same is implemented as a matter of practical application.

- As a result, records of gritting and salting will need to be obtained and scrutinized.

- The vulnerability in a Defendant's case often lies not in the policy itself, which may be proper, but in showing that the man on the ground actually did what was expected of him on the day in question. Thus, if a car leaves the road at a particular location any defence will be significantly assisted if it can be shown when it was gritted and salted (or if it was not, why not) and the absence of such evidence will lend succor to a Claimant’s case.

EVIDENCE IN SUPPORT OF THE SECTION 58 DEFENCE

Section 58(2) provides a useful indicator of the issues that the evidence should deal with particularly:

a) The character of the highway, and the traffic which was reasonably to be expected to use it.

b) The standard of maintenance appropriate for the highway of that character and used by such traffic.

c) The state of repair in which a reasonable person would have expected to find the highway.

d) Whether the highway authority knew, or could reasonably have been expected to know, that the condition of the parts of the highway to which the action relates was likely to cause danger to uses of the highway.

e) Where the highway authority could not reasonably have been expected to repair that part of the highway before the cause of action arose, what warning notices of its condition had been displayed.

THE EVIDENCE

i. The nature of the road or pavement and where it came in the hierarchy of importance to be adopted in icy conditions.

ii. The usage likely to be made of that highway or pavement and the nature of the traffic, whether vehicular or pedestrian.

iii. The standard of gritting, salting or clearance which was then appropriate or which would have been expected by a reasonable person.

iv. The extent of forewarning, by reference to weather reports and the duration of the cold weather.

v. The extent to which notices were used to warn drivers and pedestrians - in reality this is only likely to arise where there is some special factor justifying such a warning – the authorities make it plain that pedestrians and motorists can be expected to realize the nature of the weather in which they are driving.

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County Court

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COMMUNICATING WITH THE PUBLIC

- Without prejudice
- Subject to formal contract
- Recording the meeting
- Making a contemporaneous note

WRITTEN COMMUNICATION

- Proceed with caution.
- How would it look if read out in court?
- Is it legally binding?
- Is it reasonable?
- What are you hoping to achieve?

GOLDEN RULES

- Be as reasonable as circumstances allow.
- Do what you say you were going to do.
- Only threaten to bring or defend legal action if you are in a position to proceed.
- If not reserve your position.

MANAGING CLAIMS

- The letter before action.
- Pre-action Protocols.
- Alternative Dispute resolution – negotiation, mediation, conciliation and arbitration.
- Without prejudice correspondence and meeting.

THE TERRIBLE TRUTH ABOUT LAWYERS

- The purpose of the legal team.
- Legal duties as officers of the court.
- The role of the solicitor, barrister and KC.
- Managing lawyers.
- Managing time and costs.

THE COURT PROCESS

THE COURT PROCESS

- Criminal Courts
- Civil Courts
- Witnesses of Fact
- Expert Witnesses

PREPARING EVIDENCE

- What information is probative of the facts and what is admissible?
- Generally, documentation and correspondence prepared for the purposes of litigation is privileged as is communication with legal representatives (internal and external).
- Hearsay evidence is inadmissible.
- Evidence of opinion is inadmissible or carries little or no weight unless provided by an expert.

THE DUTY OF DISCLOSURE

- The preparation of documents required to be disclosed is very important.
- The legal team will advise what is required.
- All documentation should be checked before being disclosed .
- If documentation is detrimental to your case, it still must be disclosed unless privileged.

WITNESS EVIDENCE

- In most court proceedings whether criminal or civil the normal process if for witnesses to prepare witness statements which are normally signed by the witness and served on the other side.
- When giving evidence at court normally the witness is taken through his/her statement and asked to confirm whether any amendments are required.
- It is vital that if a statement is prepared for a witness the contents are true and the words used are words which the witness would normally use.
- Take care when preparing a statement and read it thoroughly and carefully to make sure you are happy with the words used, you understand everything it contains, and it is true.
- The chances are you will be cross examined about your statement and any errors or mistakes or issues about choice of language will cause problems.

EXPERT WITNESS

- Caution should be exercised in court proceedings when it is suggested a witness is to b e used to give expert evidence.

1) Where an expert witness gives evidence, they may give evidence of opinion.

2) An expert witness is a witness for the benefit of the court and the court and must give evidence independently of the parties.

- This last point can be problematical when called to give evidence on behalf of an employer as the duty to the court overrides the duty owed to the employer by the employee.

THE BURDEN AND STANDARD OF PROOF

- In a civil claim it is for the claimant to prove their case on the balance of probabilities.
- In a criminal case it is for the prosecution to prove their case beyond reasonable doubt.
- A failure to prove the case will mean the defendant will win.
- In civil cases the loser will normally pay the winners legal costs.
- In criminal cases the successful defendant is unlikely to be awarded costs.
- Costs in civil cases are ridiculously expensive, and an unsuccessful claimant or defendant will be liable for their opponents' costs as well.

LEGAL COSTS

- The courts now require parties to predict the costs likely to be incurred in proceedings.
- It is possible for a defendant to make an offer of settlement or a payment into court to protect their position as to costs.
- Claimants can sometimes gain assistance with costs via legal aid, legal insurance and particularly with personal injury claims the availability of no win no fee agreements with solicitors.
- When thinking about bringing or defending proceedings careful consideration should be given as to the likely legal costs.
- Where a decision of the court is made it may be possible to appeal the decision, but the risks associated with an appeal and the increase in legal costs relating to an appeal may make appealing uneconomical.

DO YOU HAVE ANY QUESTIONS?

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Coffee Break
3:15pm – 3:30pm

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Request your CPD certificate

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Thank you

Any questions?

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