

Winter Maintenance Forum
Safer Working on the Highway
Bradford
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Winter Maintenance 'Safer working on the highway'



Topics:

- The basic rules for winter weather events.
- Staffing issues, training, standby.
- Winter effects on 'normal' operations.

LA activities on (or near) roads

- Litter picking (verges, central reservations, paths, etc)
- Fly tipping removal
- Cutting grass (verges, central reservations, roundabouts)
- Hedge cutting
- Tree felling and trimming
- Emergency work after accidents and incidents, eg wind-blow/fallen trees, road kill, RTAs
- Flooding, clearing drainage systems
- Waste collection
- Dog waste clearance/collection
- Street lamp maintenance
- Winter maintenance
 - salt spreading/snow clearance



APSE Working on Highways and Verges Course Content & Context

- Focus on working on/near highways, urban & rural roads.
- Specific hazards in litter picking, mowing & other activities.
- Case studies, learning from incidents, prosecutions, and others in the sector.
- ‘Adequate’ precautions (traffic management, signs, vehicles, ppe, etc).
- Relevant standards (Waste 24, Chapter 8 + Red Book).
- Other sources of advice, guidance and training.
- Managing ‘H&S’ (incl. legal responsibilities & volunteers)
- Improving communications (‘tool box talks’, etc).
- Reviewing (your) risk assessments & method statements.

(‘Dynamic’) / site factors to consider



- Extreme conditions
- Poor visibility
- Fog
- Dark
- Storms: wind, rain
- Floods
- Snow & ice
- Steep ground
- Obstacles, eg road signs, barriers, vegetation, etc
- Road users & pedestrians!

Is the Winter Maintenance 'Industry' safe?



- Gritter slid off a road into a tree on the verge.
- No one was hurt but the tree and the truck's steering were damaged.
- Gritter slid into ditch.
- Towed gritter jack-knifed.
- Consequences can be more severe, especially when working alone, in remote locations.
- eg worker found with hands blue/hypothermia.

Potential hazards

during work activities on or near the road

Include:

- Collisions with other vehicles [nb. RTAs are not investigated/recorded by HSE, unless due to the ‘work activity’]
- Struck by passing or reversing vehicles
- Slips, trips and falls
- Weather conditions
- Manual handling
- Violence or aggression (public)
- Mobile phones / inattention
- + “Occupational Health” issues
- + Hypothermia



'Road Worker' Incidents

- 'At work' incidents at 'road works' have caused:
 - ~25 deaths/227 serious injuries to road workers in 10 yrs (2001-10).
 - 8 'road workers' killed in last 3 years while maintaining England's road network + "many injured".
..... + Scotland & Wales?
- 'At Work' deaths related to litter picking (in 10 yrs)?
= 2 or 3 reported
- *nb. HSE's stats do not include RTAs.*

Health and Safety at Work Act 1974 – mainly:

- Section 2 = Employers to provide a safe place of work
- Section 7 = Employees must cooperate with employers

Management of Health and Safety at Work Regs 1999

- Reg 3 = Employers must risk assess hazards

Control of Substances Hazardous to Health Regs 2002

- Employers must make an assessment of the risk from substances [Salt is harmful to humans, can cause dermatitis]

Manual Handling Operations Regs 92:

- Avoid lifting, use aids + lift safely/training

NB HSE's priority = health issues, incl stress, fatigue etc?

Provision and Use of Work Equipment Regs

- Identify machinery hazards, maintenance and training

Personal Protective Equipment Regs 1992

- All PPE must be CE marked
- Relevant and suitable PPE for gritting operations would include: Hi-vis, safety footwear, gloves, and thermal clothing.

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)

- All accidents should be reported (and recorded)
- Serious injuries, which result in 7 or more days being incapacitated, must be report the HSE
- Also specified diseases and dangerous occurrences.

THE CODE OF PRACTICE FOR HIGHWAYS MAINTENANCE MANAGEMENT, Section 13 - Winter Service

Includes relevant guidance on what is required (and would help to demonstrate compliance with HSW Act, etc), eg:

- 13.3.18 (Resilience)..... “Authorities should assess the risks that are faced in delivery of the Winter Service ... policy and management, including ... staff training and availability of operational staff”.
- 13.6.27 (Salt bins for local areas/volunteers/public use)... “Ensuring suitable risk assessments and method statements are in existence will minimise the risk of accidents occurring”.
- 13.6.28 (Local volunteers).... “need careful management to ensure safety and welfare of all involved”.

The Code of Practice for Highways Maintenance Management, s.13 (2)

- 13.7.21, (et seq)... “Ensure adequately trained and experienced staff :
- ...”To ensure appropriate level of competence, training and development needs of all personnel should be established and reviewed annually”
- “including health and safety and appropriate vocational qualifications”
- “Training provided - before the Winter Service season !
- This includes those who might be drafted in, eg refuse collection, street cleansing and grounds maintenance staff.

The Code of Practice for Highways Maintenance Management, s.13 (3)

- 13.7.25 (Training is required) including on:
- driving in difficult and hazardous road conditions including duty of care to other road users;
- circumstances where special safety considerations apply;
- snow ploughing, in particular around rail level crossings, tramways, partially segregated areas,
- dealing with emergencies;
- dealing with post ice and snow emergencies, especially flooding.

The Code of Practice for

Highways Maintenance Management, s.13 (4)

- 13.7.27 “Authorities should prepare specific health and safety policies, guidance, and risk assessments (with their service provider) - issued and discussed with all personnel, including temporary contractors, and form basis of further training as necessary”.
- 13.7.28 Training provided to service delivery personnel should also include specific reference to the health and safety needs of users, including:
 - avoiding spraying pedestrians, cyclists and vehicles
 - Avoiding risks to pedestrians and cyclists in segregated areas and on footways;
 - ploughing and manoeuvring in restricted circumstances;
 - other road vehicles that may not be under proper control.

The Code of Practice for Highways Maintenance Management, s.13 (5)

- 13.7.29 “Authorities should consider both qualifications (e.g. City and Guilds) and practical experience training.... “
- 13.7.33 (Drivers and Operators, including ‘reserves’) “are well served with vocational qualifications such as C&G 6159 modules. It is essential that any operative involved in the use or operation involved in the use or operation of any plant or machinery has received relevant formal training to do so”.
- 13.7.34 (Supervisors)... specific module under C&G 6159, ensures that first tier of management is aware of their duties and sufficiently competent to fulfil them..... This training is essential”.
- 13.7.35 Training of Senior Management/Key Stakeholders

Training Plan and Records

- 13.7.36 (et seq) Ensure formal training recorded - to monitor the training and competence of each individual involved.
- Helps identify those who require refreshers and renewal.
- Contractors should maintain similar records.
- Include a 'development action plan' for each individual and record progress in meeting that plan.
- Check training records before the season to identify whether 'out of season' training has occurred and individual training records have been updated.
- Any mentoring schemes or similar experience-based learning should also be consulted to avoid any issues later.

Also 13.7.45 - covers vehicles, plant and equipment – “to be well maintained, calibrated and reliable” *[and SAFE!]*

City & Guilds Winter Service Training Courses – for anyone responsible for operating road gritting machines and snow clearing machinery:

- Winter Service - Unit 680 (Health and Safety)
- Winter Maintenance 6159 - Training
- Winter Maintenance 6159 - Assessments
- Winter Maintenance - Unit 621 (Manager/Supervisor)

6159 includes:

- Inspecting, checking and cleaning vehicles and equipment; mounting/dismounting; spreader controls and calibration.
- Weather forecasting technology
- Salt storage, handling, suitability and effects on environment
- Health and safety, PPE

eg C&G winter service operations unit 621 'Supervision & Monitoring' = a stand alone unit, ensures 'Winter Service Supervisors' (+ duty officers and managers) are assessed against health and safety and other duties. It includes:

- Current relevant H&S legislation
- Vehicles and equipment checks and defect reporting
- Emergency procedures
- Drivers hours and working time
- Environmental considerations, application rates
- Operational planning and monitoring
- Methods for decision making
- Qualifications available for Winter Service Operations
- Data logging

Also covers:

- Legislation
- Hazards from the operation, machinery, driving & weather
- Personnel Protective Equipment (PPE)
- Emergency planning
- Pre-start checks
- Loading spreaders
- Calibrating applicators
- Gritting operations
- Machine Maintenance
- Environment Protection



Don't forget volunteers

Health and Safety briefing given?

- All snow clearing volunteers should also receive advice/ briefing when clearing snow from the highway and other hazardous areas, eg steps, near water, etc.....
- Anyone clearing snow on behalf of a Community Emergency Response Team (CERT) should be covered by Council's policy.
- Wear long sleeved hi-vis vest or jacket.
- Warm clothing and stout footwear which will provide good grip,



'Process' hazards to consider (1)

1. **Loading the spreader** with salt:

- Manual handling salt, ie lifting and handling 25kg bags to load hand-operated and trailer spreaders.
- Mechanical loading of the truck/spreader

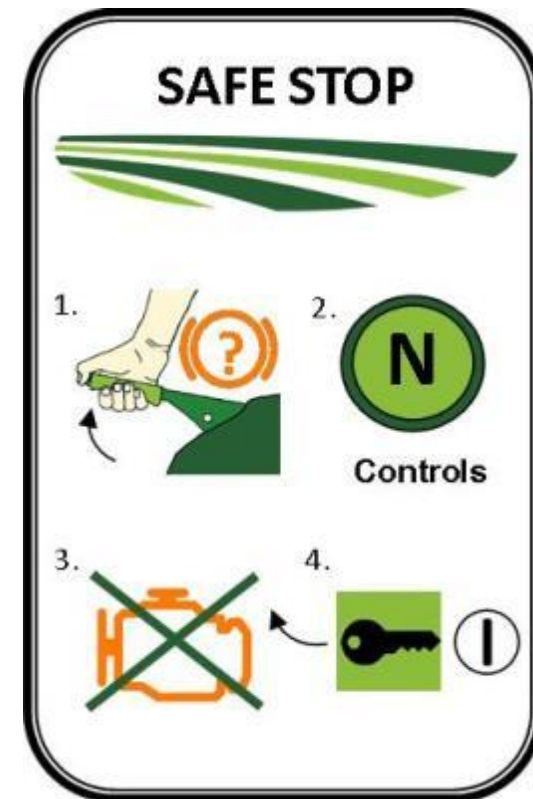
2. **Salt:**

- Causes dermatitis and skin damage to exposed skin, SO
- Protective gloves must be worn when handling salt
- Salt will also cause eye irritation, SO
- Eye protection must be worn when filling hoppers.

- 3. Members of the public**, eg when manoeuvring around sites with cars and pedestrians present:
 - Avoid spreading when pedestrians are in the area.
 - Segregate/fence off if necessary and possible.
 - Beacons, hazard lights, reversing alarms, etc must be in operation to warn drivers and pedestrians.
- 4. Weather conditions:**
 - Very low temperatures and windy conditions can cause hyperthermia,
 - wear thermal clothing and carry extra dry clothing to change into.

5. Hazards from machinery:

- Climbing onto machinery - use steps provided + keep clean and suitable footwear (to avoid slipping).
- Mechanical / moving parts, eg spreader disc, hopper auger and feed chute - Keep hands away from all moving parts.
- Hydraulic and electrical equipment:
 - do not connect or disconnect fittings without isolating first.
- Do not attempt to clear blockages when machinery is in operation.
- Do not enter the hopper, at any time.
- 'Safe Stop' procedure used?



6. Winter Driving - getting to and from sites:

- Allow extra time to drive to sites in freezing conditions
- Allow extra (stopping) space between other vehicles
- Avoid sudden changes of direction and hard braking
- Stay alert for changes in traffic ahead
- Slow down for junctions, bends
- Plan routes, use main roads.



Pre-start checks:

- Ensure vehicles have pre-season maintenance
- Tyres have a good depth of tread
- De-icer + adequate concentration window cleaning solution for anticipated temperature, and
- All equipment checked and overhauled before use.

What do you need to survive if you get stuck in snow?

- Extra dry clothes
- Emergency blankets
- Hot Drink & high energy food
- Snow shovels, snow mats
- Full fuel tank and spare fuel can
- Working phone - with charger and spare battery
- Know your position to direct help to you
- Call emergency services
- NB. Use #112 as it will locate your position via GPS.
- Stay with your vehicle if you are stuck, do not leave the vehicle to attempt the walk to safety.

Using 112



EMERGENCY AND NO SIGNAL???

Did you know:

- You can improve reception by turning 180 degrees!
- You can contact Emergency Services by SMS text via 112 - *even when poor mobile phone signal*
- 112 is EU-wide + many non-EU countries.
- To use 112 SMS you must first register a mobile number by:
- Texting 'register' (*in lower case*) to 999 - then reply 'yes' when asked to confirm.
- See film: '*Help Me – the secrets of using 112 on a mobile phone in an emergency / accident*'

http://www.youtube.com/watch?v=XPZv_8dABfU

Some prosecutions of Local Authorities,
highlighting Hazards and Risks
(& Who is responsible)

Sevenoaks Road Sweeper case (Dec 2015)

- M/cyclist killed (Sept 2010) trying to avoid road sweeper travelling at 4mph in outside lane of 40mph dual lane slip road (off A20) – sweeper obscured by bend.
- Sweeper had flashing beacons and 610 (blue arrow) sign on back, but no advance warning (cones or road signs) or temporary traffic management (TTM) in place.



Sevenoaks road sweeper case

- Sevenoaks DC fined £40k + £32k costs (pleaded guilty, s2(1) and 3(1) of HSWA. *[Financial implications considered]*)
- HSE's comments: "Competent risk assessments are essential... to identify appropriate controls and such controls need to be implemented and checked to ensure they remain suitable and sufficient," and....
- "Relevant industry guidance is there to be viewed when deciding what controls are needed," AND...
- "This incident shows how important it is for local councils and companies to properly assess the risk of work tasks. If (it) had been properly risk assessed, planned and suitable controls used, Mr McCulloch would not have been killed. This is truly a tragic case and was entirely preventable."
-***The Judge agreed!***

Manchester litter picker case (2013)



- Council employee injured in good weather
- 60yr old litter picker struck by car when crossing dual carriageway
- Manchester CC fined £15k + ~£4k costs.
- Risk assessment inadequate – HSE issued IN.
- MCC updated health and safety training (*employees claimed 'never seen' 2012 risk assessment*)
- HSE guidance = driving for work or working in or near live traffic (eg at construction sites and crossing roads on foot) - can be found at: <http://www.hse.gov.uk/roadsafety/>
- So *WISH* have produced specific guidance [*'Waste 24'*]

Veolia Litter Picker killed in Kent (2007)

- 20yr old agency worker (Kent).
- Picking litter on grass verge.
- Dual c/way, bright day.
- Cage vehicle travelling behind litter picker was struck by HGV and pushed into him.
- HSE commented:
 - “Work activity was not safe or properly planned” +
 - “other road users also put at risk”.
- **Veolia fined** £225k + >£95K costs in Aug 2010.
- LA prosecution (HSWA s3) dropped at Court.



Thanet Council Hand-Arm Vibration (HAVS) case (Nov 2016)



- Strimmers used for 6 hrs/day
- for up to 10 yrs
- with no risk assessment or controls in place until 2014 .
- 12 grounds maintenance workers diagnosed with HAVS
- + 40 others referred to 'Occupational Health'.
- Fined £250k + £18k costs
- Judge considered Council's cash reserves already 'dangerously low'.
- Civil claims will follow
- Total payouts likely to run into £millions....

Emergency Tree Clearance?

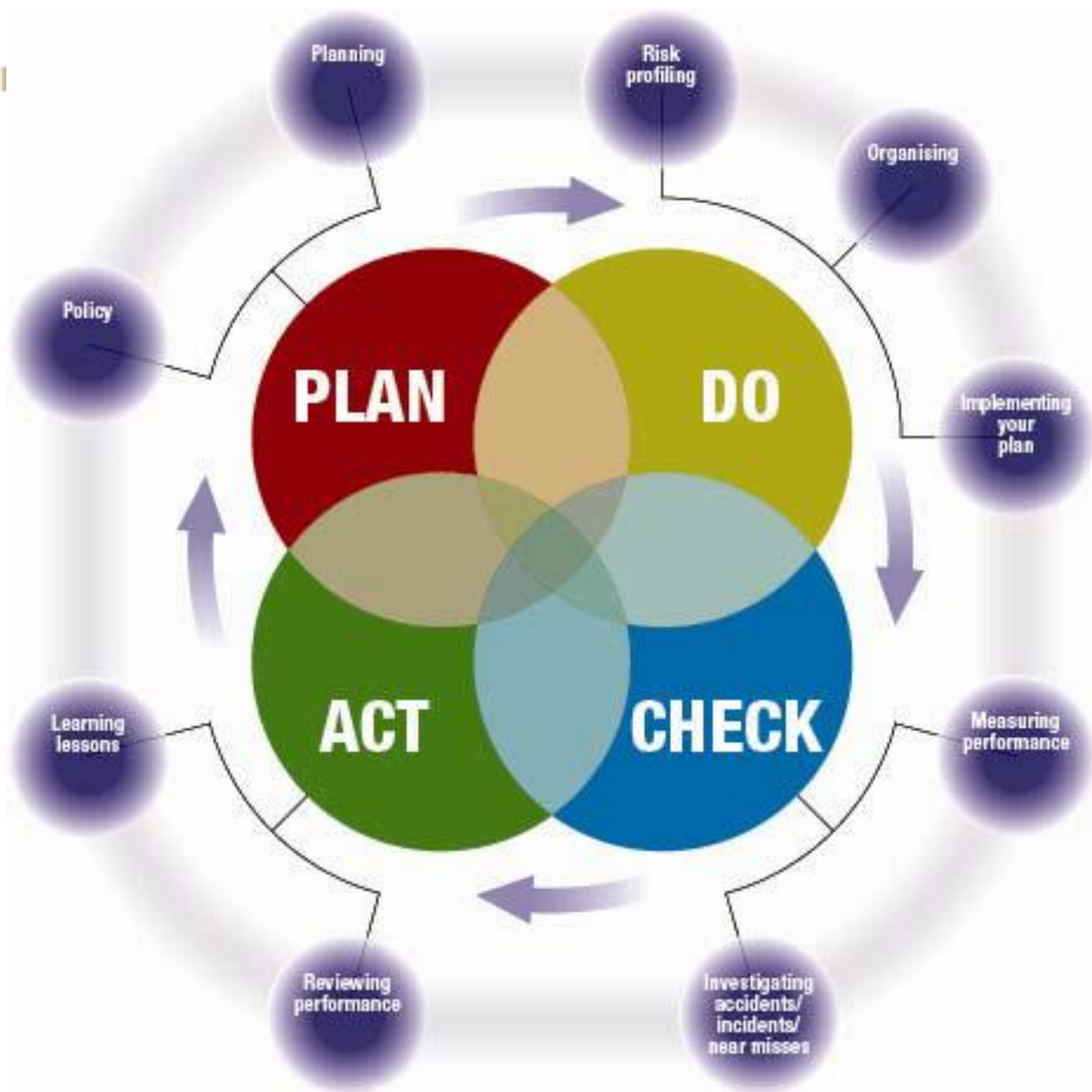
- **Gateshead Council** fined £40k + ~£6k costs (July 2014) for failing to ensure contractor competent to fell large tree (25m poplar) in Jan 2012.
- Tree on steep slope, fell on rail line and hit by train
- Contractor's penalty = 150hrs + £6k costs
- Worker knocked unconscious when hit on head by tree or train + fractured ankle!
- No winch used + R/A dubious?
- Damage to train?
- ~£100k !!! [+ £7k delays, etc]



Man crushed by tractor clearing branches (Prosecution 4/17)

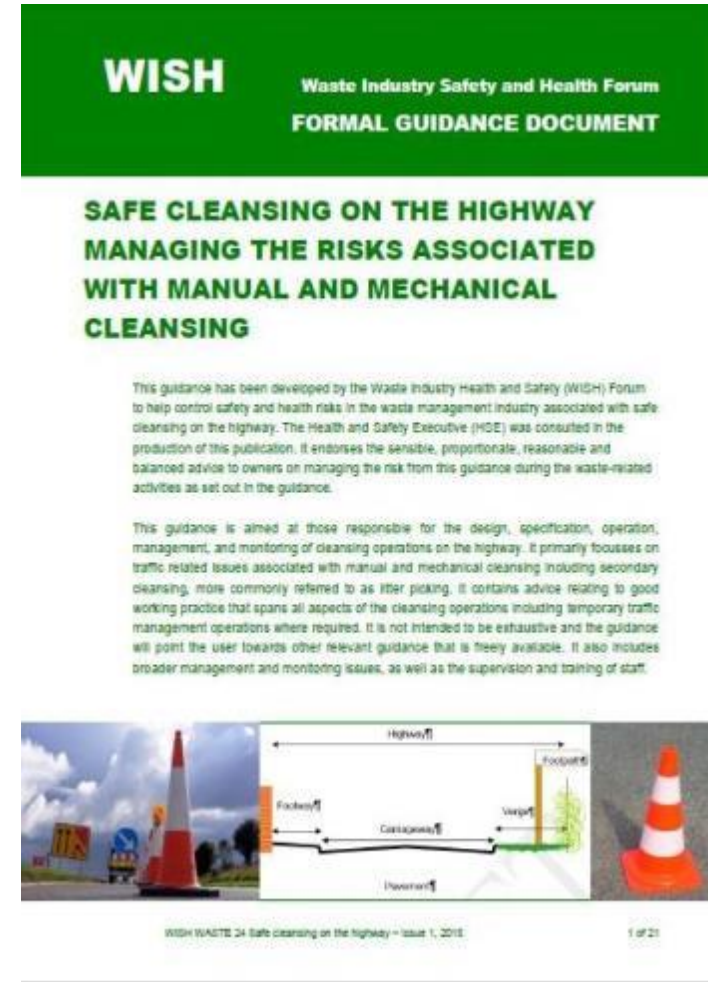
Notts CC fined £1mill ! under s.2(1) and s.3(1) HSWA + nearly £10.3k costs after 71yr-old struck by tractor in Country Park.

- Operator 'didn't see him' (disabled, on a guided walk!).
- Lucky 'only' serious bruising + head & limb injuries.
- HSE: Unsafe system of work - movements not segregated;
- Workers not adequately trained for grab or as a banksman;
- Equipment unsuitable to transport materials long distances;
- Inadequate supervision/planning for work in public place.
- HSE inspector: *"Duty holders have responsibility to assess work in public areas to lower risk, particularly when new plant or equipment is introduced."*



Scope of Waste 24 'Safe Cleansing on the Highway'

- Guidance on 'assessing and managing the risks of manual & mechanical cleansing'.
- 'Applies to and will assist' those responsible for design, specifying contracts, and managing operations.
- Includes advice on monitoring, supervision and training.
- Defers to 'Chapter 8' & 'Red Book', BUT
- Emphasises LAs must base decisions on risk assessment of each situation.



<http://ciwm.org.uk/wish>

At the end of the day...

This is what we are all trying to avoid



Good luck

..... or good management?

Any questions?

Thanks to Neil Huck,
for information and material.



And thanks to you all, for
staying -on a Friday afternoon!



"Sorry boss - can't get in today
I'm snowed in"

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