WISH

APSE webinar 6th August 2025

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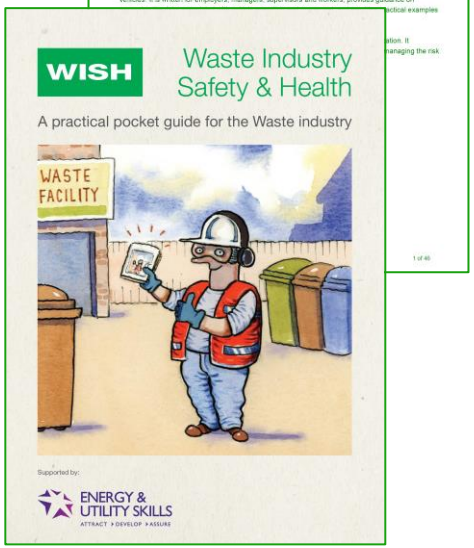
Waste Industry Safety and Health Forum

Introduction to WISH

WISH (Waste Industry Safety and Health Forum) - formed >25 years ago:

- Cross-industry body (not an industry trade body organisation or similar), and independent
- WISH Steering Group includes:
  - HSE (Health and Safety Executive)
  - LARAC (Local Authority Recycling Advisory Committee)
  - ESA (Environmental Services Association)
  - CIWM (Chartered Institution of Wastes Management)
  - WRAP (Waste Recycling Action Programme)
  - GMB (union representation)
  - BMRA (British Metals Recycling Association)
  - LAWS (local authority safety body)
  - SWITCH (Scottish Waste Industry Training, Competency, Health & Safety)



Introduction to WISH

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WISH's main activities include:

- Identifying critical health and safety and related issues for the waste and recycling sector
- Providing strategy and direction on these
- Producing sector guidance/advice documents

Other activities include:

- Liaising with the HSE on current and new waste and recycling health and safety issues
- Providing a 'discussion space' for the sector
- Answering queries, usually made via the WISH website 'info@' function
- Co-ordinating research, such as on waste fires
- Holding 'WISHADs' for SMEs etc

More detail is available on the WISH website at: https://www.wishforum.org.uk/

All WISH documents are free downloads – WISH is a non-profit making, voluntary organisation

Introduction to WISH

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WISH's most 'visible' activity is the production of guidance and advice documents for the sector. Three levels of document:

- Formal guidance ('WISH WASTE' series). Endorsed by the HSE. Can be (and is) used in court as evidence. Provides the 'what' you should do. Currently 22 documents on topics from the operation of HWRCs and machinery safety, to waste site fire risk and waste collections. All available at: https://www.wishforum.org.uk/wish-guidance/
- Information sheets ('WISH INFO series'). Typically, provide the 'how' and good practice. Not formal guidance but supported by the HSE and those who do not follow the advice given may be asked to prove what they did as an alternative was just as effective. Currently 27 documents. All available at: https://www.wishforum.org.uk/information/
- Reference documents ('WISH REF' series). Case studies, example forms and checklists, position statements, 'back to basics' guides etc. Currently 14 documents, at: https://www.wishforum.org.uk/support/

A fourth category may be added providing links to useful non-WISH documents, such as ESA's guides on DSEAR and landfill gas, CHEM waste container standards etc

Lithium battery fire risk

Waste fires are a major risk, both at waste and recycling sites and during waste collections, with various causes from hot works and electrical faults to self-heating, poorly extinguished barbeques, gas cylinders etc. However, inappropriately disposed of lithium batteries are also a significant cause:

- Much research has been conducted on the causations of waste and recycling site fires. This indicates 40-50% of all significant and damaging waste and recycling site fires are caused by inappropriately disposed of lithium batteries, equating to 200+ fires a year
- Coherent data for waste collections is not available, although some survey-type exercises have been conducted. This survey and anecdotal evidence is that fires in GB waste collection vehicles may have risen over recent years from perhaps one a week to at least one a day currently, and many of these have been attributed to lithium batteries

Lithium battery fire risk

Guidance on fires at waste and recycling sites is available, such as:

- WISH INFO 08 '*Fire risk and lithium batteries at waste transfer, recycling and recovery operations*', at: INFO 08
- For specific site types, fire risk sections in documents such as WISH WASTE 26 '*Managing H&S at HWRC/CA sites*' at: WASTE 26
- General waste site fire risk in WISH WASTE 28 '*Reducing fire risk at waste management sites*' at: WASTE 28

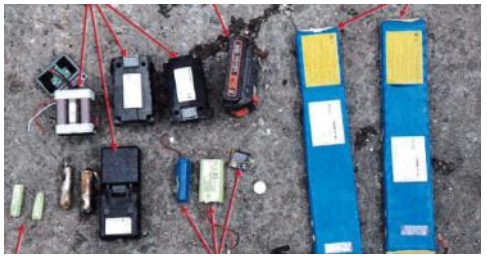
Little (or nothing) is currently available regarding collection vehicle fires, including those caused by lithium batteries. This gap has been identified:

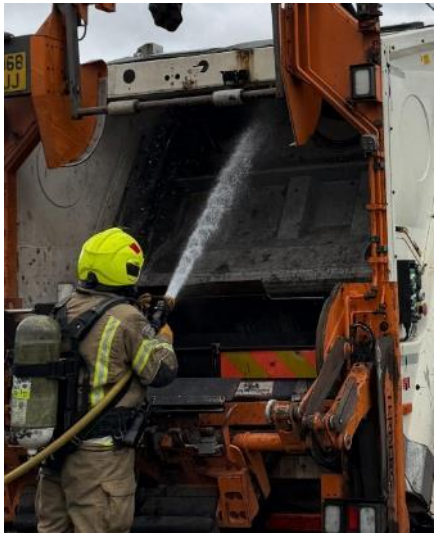
- WISH is currently working on an information sheet on managing waste collection vehicle fires, due for release later this year
- The issue has been identified by the FRS (fire and rescue services) 'waste tactical advisors' with the aim of producing a common national approach to how the FRS tackle collection vehicle fires

However, all the above is mitigation. Ultimately, this is a societal issue – waste and recycling operators (and the FRS) are generally not in direct control of what people put in waste bins etc

Lithium battery fire risk

- The variety and size of lithium batteries found in general and recycling waste streams is wide (photo top right shows batteries found during a single sampling exercise on a recycling waste stream)
- Typically, the larger the battery the greater the risk (photo second right shows an e-scooter battery from a fire in a collections vehicle). While vape batteries are fairly small, in terms of frequency of occurrence, vapes in waste streams are a current concern
- An estimated 5-8 million vapes are disposed of every week in the UK. Correct disposal route is via ‘take-back’ bins in retail etc premises or via local HWRC/CA sites (many now have dedicated bins). Research indicates that only around 17% of vapes are disposed of correctly, leaving millions disposed of inappropriately. Obviously, not every inappropriately disposed of vape causes a fire (we would be running out of recycling plants and collections vehicles), but sheer numbers can count…





Lithium battery fire risk

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Predicting what the future may hold for vape waste fire risk is difficult – there are multiple factors involved, many of which are not encouraging:

- **Recent research at the OU indicates that the action of compaction mechanisms on waste collection vehicles is more than sufficient to rupture vape batteries, and that the quality and consistency of vape manufacture is often poor. For example, on dismantling a batch of one model of vape three different batteries of varying charge density and output were found – it almost seemed the manufacturer was just using whatever battery it could find that would fit in the vape casing. It seems unlikely in the short term that this type of factor will change unless more stringent standards and enforcement are put in place**
- **Disposable vapes have been banned for sale from 1 June 2025 – it is too soon to assess what effect this may have. However, some vape manufacturers are now producing vapes which meet the definition of re-useable vapes but at a price-point similar to disposable vapes, and the number of illegal vapes seized by trading standards has increased 100-fold since 2020, with some 1.2 million illegal vapes being seized in the 2023/2024 year – this seems likely the 'tip of the iceberg'**

Lithium battery fire risk

There are some more encouraging factors:

- The issue of vapes and fire risk in waste collections vehicles and at recycling sites is now higher-profile than it was, and publicity such as social and other media campaigns, bin-stickers, leaflets etc can assist to promote correct disposal, although these may have a limited effect on some target audiences
- Pressure is being put on retailers and others to increase the number of and ease of access to vape take-back bins, although some are reluctant as vape recycling is often difficult and costly
- Waste and recycling operators are more familiar with and prepared for the risk, and the increase of dedicated vape bins at HWRC sites is likely to be helping, although this relies on people 'doing the right thing'
- There are indications that some people are moving away from vapes to alternative 'nicotine type' products which do not use lithium batteries

There are some positive indicators, and there is more that waste and recycling sites and collections activities can do. However, it seems very unlikely that the risk of waste fires associated with vapes (and other lithium battery powered devices) will go-away any time soon…

A couple of other ‘hot topics’

RCV (bin-lorry) bin-lifts in automatic mode

The sector has suffered a series of serious and fatal accidents involving collections operatives being entangled in bin-lifts and/or lifted into the RCV’s load hopper and crushed by its compaction machinery (see WISH INFO 26 for more detail, at INFO 26)

- **Not practical to completely stop using automatic mode – 20-30% reduction in collection efficiency**
- **Better awareness of the risk and training of collections operatives is required**
- **Physical controls require improvement - modification of control systems, modified and/or additional switches, sensing, AI camera, transceiver etc systems being implemented by suppliers and users**
- **Annex to EN1501-5 (standard for bin-lifts) in production to address the issue**

All users, including local authorities, of RCVs need to be aware of the issue and have a plan in place

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INFORMATION DOCUMENT

SAFETY IN THE OPERATION OF AUTOMATIC BIN LIFTING EQUIPMENT ON RCVs

This WISH information document is aimed at health and safety improvements in the waste management industry. The Health and Safety Executive provided support to WISH in producing this guidance. This guidance may go further than the minimum you need to do to comply with the law with regard to health and safety

Contents

In March 2023 WISH issued a position statement on the safe use of RCV (refuse collection vehicle – bin lorry) bin-lift equipment in automatic mode. This sheet is based on the above statement, expanded to account for developments since its publication. It is anticipated this sheet will likely be revised and updated in the future to take account of further developments. This information sheet is primarily aimed at users of RCV bin-lifting equipment with automatic mode. Designers, manufacturers, and suppliers may also find the information useful.

Note – WISH has been asked numerous questions on the topics in this information sheet. To assist the sector, WISH has reproduced the most common questions asked and the answers to these as a FAQs sheet. This sheet is available as WISH REF 13 at: WISH REF 13.

A couple of other 'hot topics'

WISH

Alternative fuels/power for RCVs etc

Most waste collection vehicles are still powered by diesel. However, there is an increasing trend towards alternative power sources, such as electric vehicles, gas (LPG, CNG etc), hydrogen fuel cells etc. This may be good for the environment, but safe design is also a factor to be considered

- For example, we know that fires in the load compartment of collection vehicles occur. Would it be wise to place CNG cylinders to power a collection vehicle directly on top of its load compartment? The photo top right shows such an arrangement, and the photo bottom right what happened when a lithium battery caused fire occurred in such a vehicle's load compartment

When considering alternative power sources, on new vehicles or modification/refurbishment of existing, safety concerns need to be part of the design

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