



OnSite Support Research Team

Best Practices in Recycling PPE

Helping towards a truly circular economy



This and other white papers have been developed by the OnSite Support Research Team in collaboration with leading independent bodies and other partners.



The Challenge

In 1987, the United Nations Brundtland Commission defined sustainability as meeting the needs of the present without compromising the ability of future generations to meet their own needs. The challenge we face today goes beyond simply avoiding landfill. Sustainable development is the core aim of the UN's 2030 Development Agenda, built on three pillars: economic, social and environmental.

Now more than ever, we all have a responsibility to our stakeholders to be more considered in how we procure, use and dispose of the resources our operations rely on. PPE is no exception.

By taking a more responsible approach to the lifecycle management of PPE we will minimise the impact on the planet, creating value and benefit for all stakeholders.

62%

of all UK waste in 2018 was attributed to the construction, demolition and excavation industry (DEFRA)

350,000t

of textiles sent to UK landfill every year

40%

of all plastic generated on a construction site ends up in landfill

PPE and workwear often have a high plastic content — as does their protective packaging. The built environment sector generates more of this waste than any other industry in the UK. That makes responsible end-of-life management of PPE both an ethical obligation and an increasingly commercial one.

Background

Many organisations are now considering how best to manage end-of-life PPE, workwear and corporate apparel — and increasingly, this is being built into procurement requirements rather than left to individual sites. Responsible disposal is moving from a nice-to-have to a contractual expectation.

A secure destruction and recycling service protects intellectual property, improves security, and delivers environmental and sustainability benefits. Critically: all PPE, workwear and corporate apparel can be responsibly managed at end of life if you are committed to doing so.

The OnSite Support Service

How the service works

Our PPE and packaging recycling service is built around simplicity for the client and rigour in processing. There is no need for sites to sort or segregate PPE by type. Everything goes into the secure sacks provided, placed into the secure wheeled bins we supply. We take care of the rest.



Consumer disposal

Single secure bin. All types of PPE. No segregation required.

Collection

- On backloads wherever possible, minimising additional vehicle movements
- Fully traceable from individual site location
- Waste carrier licensed
- FORS Gold-accredited fleet for locations we serve directly; licensed service partner for all other locations

Processing

- Secure certified destruction of all company and project logos and names — guaranteed
- Certificate of Destruction available upon request
- Zero waste to landfill
- Evidenced end-of-life solutions with fully auditable waste stream reporting
- All PPE is destroyed — items cannot be re-worn or redistributed

Reporting

Reporting goes beyond standard waste transfer notes. Clients receive a full Power BI-style web-based breakdown identifying waste streams, volumes processed and end-of-life routes — giving you the auditable documentation needed for ESG reporting, tender submissions and Scope 3 evidence. This is integrated within our PLUS programme for clients who use it.



What Happens to the PPE

Secure destruction first

Our processing partner, operates as a secure destruction provider first and foremost. All PPE collected is destroyed — it cannot be re-worn or re-used. This is a deliberate and important distinction from approaches that seek to redistribute or resell end-of-life PPE. Many PPE items carry a defined use-life or certification period. Hard hats, for example, must not be worn beyond that period regardless of their physical condition. Allowing end-of-life PPE back into use creates a safety and liability risk.

Our recycling partner is one of the largest non-paper secure destruction company in the UK, holding contracts with multiple public and private sector organisations. Their client base includes Blue Light Services — UK police forces, fire and rescue services and NHS trusts — alongside leading private sector organisations including Asda, Ikea, Tesco, Sainsbury's, John Lewis Group, Royal Mail, Network Rail, BT, British Gas, Aldi, Wilko, B&M, British Airways and FedEx, among many others. For clients carrying out supply chain due diligence, this is a well-scrutinised, auditable track record.

Textiles and garments

Textile items — garments, workwear, high-vis clothing — are processed into fibre for industrial end uses, contributing to a circular economy. The recyclability of textiles is influenced by fabric composition and the level of contamination. As a rule, primary contamination from normal use is acceptable. Secondary contamination — storing PPE wet, or mixing it with domestic waste — reduces recycling potential. Keeping sacks dry and dedicated to PPE is the single most practical step sites can take to maximise textile recycling outcomes.



Non-clothing items

Non-clothing PPE items — including hard hats, gloves, footwear and eyewear — are currently processed through Energy from Waste (EfW) or Solid Recovered Fuel (SRF) routes. These are regulated, recognised disposal routes and are significantly better than landfill. EfW generates power from waste that cannot be cost-effectively recycled; SRF processes shredded material into fuel pellets for industrial use.

This approach is consistent with best practice for non-textile PPE at this stage of the industry's development. The technology to cost-effectively separate and recycle composite materials (PU-coated gloves, chrome leather, rubber composites) does not yet exist at scale. EfW and SRF represent the responsible alternative.

Industrial PPE and the Recycling Challenge

Industrial PPE presents the lowest recycling-to-recovery rates of any apparel category. This is because of the materials used and the levels of contamination they carry. Safety gloves are a good example: chrome leather, PU-coated and rubber composite gloves are designed to be robust and long-lasting. The technology to separate PU coatings from textile backings, while technically possible through chemical separation, is prohibitively expensive and the environmental benefits remain unproven. It is realistic to say that many non-textile PPE items can be recovered but not recycled in the conventional sense.

Other items in this category include foam ear plugs, rope, lifting slings, climbing equipment and harnesses. For these, EfW and SRF remain the most practical, cost-effective and environmentally responsible routes at the current time.

This is not a failure of ambition — it reflects the current state of the technology. The industry is developing, and this white paper will be updated as better end-of-life routes become available.

Alternative Approaches to Clothing Disposal

The main alternative to specialist reprocessing is the charity clothing sector. The largest operators — including Oxfam Wastesaver and The Salvation Army — process thousands of tonnes of donated clothing each week. Around 60 per cent of what they collect is either sold in charity shops or exported as used clothing. The remainder, however, still requires recycling.

Main export markets for donated clothing are Africa (where lighter weight and cotton garments are preferred) and parts of Asia. There is however a very limited market for items such as heavily worn clothing, very large sizes, suiting and denim.

For end-of-life PPE specifically, the charity clothing route is not appropriate. PPE carries safety certifications and use-life limitations that make redistribution a liability. Specialist secure destruction — not charity donation — is the correct route for any branded or safety-critical item.



Reduce



Reuse



Recycle

Your Legal Responsibilities

According to UK Government guidance, businesses must keep waste to a minimum by doing everything they reasonably can to prevent, reuse, recycle or recover waste. Any waste arising from a commercial activity is classified as business waste — including waste from construction, demolition, industry and agriculture.



Business waste must be stored safely, not causing harm to people or the environment, and disposed of responsibly — using a registered waste carrier and a licensed site.

For more information on your obligations: gov.uk/dispose-business-commercial-waste

The Cost of Doing Nothing

Landfill

Landfill Tax applies to all waste disposed of by way of landfill, charged by weight. The rate has been rising consistently and continues to increase at around 20 per cent per annum in the UK — and by similar rates across the EU. Businesses also pay gate fees to local authorities and licensed sites on top of the tax itself.

As HM Revenue and Customs has noted, the high and rising cost of commercial waste disposal is actively encouraging more businesses to recycle. For procurement and finance teams, the economics of recycling are increasingly compelling alongside the ethical case.

Recycling and reprocessing

There is a cost to responsible end-of-life management. Whether material is sorted and converted for reprocessing, or processed through EfW or SRF routes, a fee applies. This fee covers sorting, processing, reporting and delivery to the relevant end use. It is a cost worth understanding clearly — not as an overhead to minimise, but as part of the true whole-life cost of PPE procurement.

Thinking Beyond Recycling

Best practice

Recycling is important — but it is the last step in the lifecycle, not the first. The greatest impact comes from decisions made at the procurement stage. Here are practical steps that make a measurable difference:

- Buy longer lasting, comfortable PPE — reducing replacement frequency is the most direct way to reduce waste
- Procure items evidenced as carbon neutral or made from recycled content
- Select items with reduced or plastic-free packaging
- Reduce avoidable waste through premature disposal — a PPE lifecycle audit can identify where items are being replaced before they need to be
- Use our laundry service to extend garment life before items reach end of life — laundered PPE also achieves better recycling outcomes
- Recycle responsibly: use a service that provides full end-of-life reporting, not just a bin
- Think about whole-life impact, not just unit price

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13 CLIMATE ACTION



17 PARTNERSHIPS FOR THE GOALS





Other Considerations

In addition to environmental considerations, there is now a growing emphasis on organisations embedding ethical practices within their procurement and disposal arrangements. Through legislation such as the Landfill Directive and the Modern Slavery Act, investors, clients and contractors are including responsible sourcing and disposal criteria in their selection processes and tender documents.

Being able to evidence certified destruction of branded PPE — with auditable waste stream data and a Certificate of Destruction — is increasingly expected by Tier 1 contractors and public sector frameworks. This is no longer a differentiator; for many frameworks, it is a baseline requirement.

Conclusion

Responsible management of end-of-life PPE is not a complex ask. It requires commitment, the right partner, and a clear process. The barriers are low; the benefits — to your ESG reporting, your tender submissions, your compliance obligations and the environment — are real and measurable.

The single most important step any site can take is to stop sending PPE to general waste or landfill. A single bin, a simple collection process and the right partner is all it takes to divert 100 per cent of collected PPE from landfill — with full documentation to prove it.

No matter the type of PPE — garments, hard hats, boots, gloves, eyewear or RPE filters — the service accepts everything. The cleaner the PPE, the better the textile recycling outcome; but nothing should be held back from the service.

Working with OnSite Support allows you to contribute towards a circular economy, reduce the impact of your operations on landfill, and evidence responsible procurement in every tender and ESG submission.

To set up your recycling service, or to find out more, contact us:

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