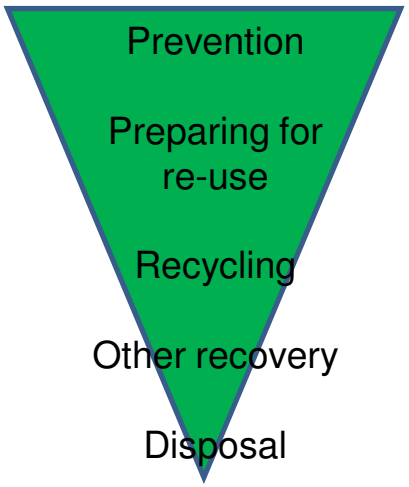
Waste Audit Trail

This document has been produced by Pure Clean Waste Solutions Ltd to show how waste materials are collected, re-used, recycled and recovered.



There is a 5 step Waste Hierarchy which is an important requirement of the revised Waste Framework Directive. It applies to anyone who produces or manages waste. Unless there is a good reason not to, a waste should be managed, in order of preference, by:

1.**Prevention**; measures taken before a substance, material or product has become waste, that reduce (a) the quantity of waste, including through the re-use of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health; or (c) the content of harmful substances in materials and products.

2.**Preparing for re-use**; checking, cleaning or repairing recovery operations, by which products or components of such products that have become waste are prepared so that they can be re-used without any other pre-processing.

3.**Recycling;** any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. Includes the reprocessing of organic material (2) but not energy recovery or the reprocessing into materials that are to be used as fuels or backfilling operations

4.**Other recovery;** e.g. energy recovery

5.Disposal; any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy

This will assist you when completing a consignment note, a consignor must sign the declaration in Part D to indicate that you have considered the hierarchy before transferring your waste.

Waste Audit Trail – Aerosols

Customer

Aerosols (UN1950) are collated in labelled, UN approved open top drums from our customers premises.

The waste is taken to Pure Clean Waste Solutions Ltd by our fully qualified ADR drivers. The Aerosols are taken to our depot in Stockport and bulk stored until disposal to recovery plant.

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Recycling Plant

The Aerosols are separated – aluminium from steel, de-capped, debris removed and then shred. The shredded cans fall onto a vibrating sieve which allows any liquid to fall through.

The **waste solvent** is recovered and used as a secondary liquid fuel.

The **waste metal** is recycled.

The **waste gases** are currently absorbed on to carbon. Development is being made to re-use the gas in new Aerosols.

The **plastic caps** are cleaned and sent for plastic recycling.

Waste Audit Trail - Antifreeze

Customer

The hazardous waste product Antifreeze (UN1171) is collected in 'UN' approved 205 litre closed top containers.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport, where we collate them until ready for disposal to the Recovery Plant.

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Recycling Plant

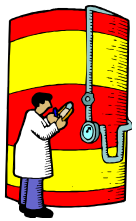
The Antifreeze is biologically treated through a high rate biological trickle filter to remover COD (chemically precipitated to floc out metals) and discharged to the sewer.

Waste Audit Trail – Aqueous Degreaser

Customer

The hazardous (for Environment only) waste product Aqueous Parts Washer Fluid (Aqueous Degreaser) is taken from customers site in UN approved 205litre containers.

The waste is transported by Pure Clean Waste Solutions Ltd approved vehicles and qualified fully trained drivers to the site in Stockport where the waste is bulk stored.



The Waste is deposited into 'Bulk Storage Tanks' prior to despatch to the Recovery Plant.

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Recycling Plant

The waste is collected on a regular basis with other similar waste products and taken to a treatment centre.

The waste is recycled using a 'filtration' process and the waste water element is sent for further treatment at a water treatment works.

Waste Audit Trail – Aqueous Paint Waste

Customer

The hazardous waste product Aqueous Paint Waste (UN12630) is taken from customers site in UN approved 205 & 25 litre containers.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and qualified fully trained drivers to the site in Stockport where the waste is collated and stored ready for collection.

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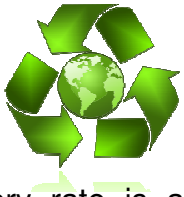
Recycling Plant

The waste is collected on a regular basis with other similar waste products and taken to a treatment centre.

The waste material is vacuum sucked out of the containers, distilled off, collected and mixed with various components to produce Solvents (Thinners).

The containers (Steel IBC's) and any sludge/residue is 'squashed' in a press. The 'squashed' drum is shred into small pieces , washed and sent for metal recovery.

Any residue sludge is sent to the cement kilns – it is used as a replacement for fossil fuels.



100% recovery rate is achieved through the various recovery methods (including waste material and packaging).

Waste Audit Trail – Brake Fluid

Customer

The waste Brake Fluid is collected in 'UN' approved 60 and 205 litre closed top containers.

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The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport, where they are held awaiting collection from the recovery plant

Recycling Plant

The waste is bulked up, treated by heat & gravity and use of synthetic emulsion breakers in order to split out any water/sludge. The water layer follows the same route as the Antifreeze (see Waste Audit Trail – Antifreeze).

Any oil taken off will then be blended with other fuel oils, screened, filtered and heated again to drive out any last small amounts of water, prior to filtering again and batching for re-use as a fuel.

Waste Audit Trail – Oil Filters

Customer

Oil Filters are collated in labelled, UN approved open top drums from our customers premises

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

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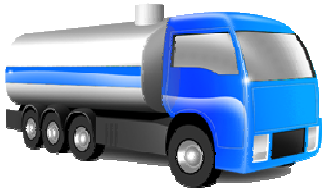
The Oil Filters are emptied into our purpose built 'Kruncher' which crushes the oil filters, squeezing out as much excess oil as possible before the filters are sent away for recycling.

Crushed Oil Filters

Oil

The crushed oil filters are taken away to a Metal Recovery Plant



The oil 'squashed' out of the filters is pumped into our holding tanks and then transferred to an Oil Recovery Plant.

Recycling Plant

45 Gallon drums containing filters are drained for approx two weeks onto a concrete base. Once the filters have been drained they are chopped into small pieces (Frag). The Frag's are smelted down and made into new filters.

The waste is recycled - 100% of the Oil Filter is recycled and recovered

Waste Audit Trail – Soiled Absorbents

Customer

Soiled Absorbents are collected in labelled, UN approved open top drums from our customers premises.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport, where we collate them until ready for disposal to the Recovery Plant.

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Recycling Plant

Granules – The process for disposal consists of the separation of different materials. The material is tipped through a 6” grille into a pit which feeds the plant. The plant heats and shakes the waste before centrifuging it to separate oil, solids and water. The water is used in the rag wash process, the solids are consolidated for landfill and the oil is improved by further heat separation in tanks and sent for further recovery.

Rags - Oil contaminated rags are laundered. The oil removed is sent for further recovery and the rags are re-used.

Waste Audit Trail – Hoses (Oil contaminated)

Customer

Hoses (oil contaminated) are collected in labelled, UN approved open top drums from our customers premises.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

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Before disposal to the recovery plant any metal components are removed from the waste and a separated waste disposal stream is followed.

Recycling Plant

Sent to a treatment site for shredding / consolidation followed by landfill

Waste Audit Trail - Batteries

Customer

Batteries (UN2794) are collected from our customers in ‘UN’ approved 100 or 400 containers

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

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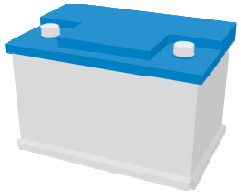
The recovery plant used is the largest lead recycling collector and lead smelter in Europe.

Recycling Plant



Process – The acid is drained from the batteries and recycled in-house. The Batteries are sent through a ‘Battery Breaker’ where the polypropylene is extracted and recycled in-house. The reclaimed lead is passed through a Rotary Furnace, at this state the ‘paste’ is separated and is re-cycled in-house. Ingot casters are made from the recycled lead which is sent for sale into the lead industry.

99.9% of the Battery is recycled and recovered.

Waste Audit Trail – Mastic Tubes

Mastic Tubes are collected in labelled, UN approved open top drums from our customers premises.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

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All waste is transferred to IBC's awaiting collection to the Recovery Plant.

Sent to a treatment site for shredding / consolidation followed by landfill

Waste Audit Trail – Mixed Fuels

Customer

The hazardous waste product Mixed Fuels (UN1268) is collected in 'UN' approved 205 litre closed top containers.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

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Recycling Plant

The waste contaminated fuel (mixed road fuel) is recycled by draining off the water and distilling the Petrol from the Diesel.

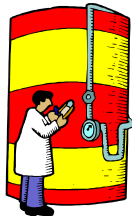
Approximately 98% of the waste mixed fuel is recovered.

Waste Audit Trail – Kerosene/ODK

Customer

The hazardous waste Kerosene/ODK (UN1223) is collected in 'UN' approved 205 Litre closed top

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport, where it is bulk stored ready for disposal to the recovery plant.



The Waste is deposited into 'Bulk Storage Tanks' prior to despatch to the Recovery Plant.

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Recycling Plant

A flash distillation process is used to refine and remove any contaminants from the waste. This is conducted through the 'high' boiling point or 'low' boiling point.

The 'middle cut' (same boiling point as the original Kerosene) is taken out and returned as recycled Kerosene.

Waste Audit Trail – Paint Contaminated Waste

Customer

Paint Contaminated Waste (UN1263) is collected in labelled, UN approved open top drums from our customers premises.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

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Before disposal to the recovery plant any metal components are removed from the waste and a separated waste disposal stream is followed.

Recycling Plant

The paint containers and any sludge/residue is 'squashed' in a press. The 'squashed' drum is shred into small pieces, washed and sent for metal recovery.

The Paint Waste is sent to a treatment site for shredding and used as a secondary fuel

Waste Audit Trail – Solvents

Customer

The waste solvent from parts washer machines is collected in ‘UN’ approved 205 litre closed top containers.

The waste is brought back to Pure Clean Waste Solutions Ltd Depots in Stockport. , where the waste is deposited into ‘Waste Solvent Tanks’.

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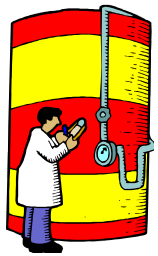
The recycled solvent is returned to Pure Clean Waste Soutions Ltd for re-use.

For every 100 litres of waste sent for recovery we receive back approx . 75 litres; 20-25% is lost during process.



The Waste is deposited into ‘Waste Solvent Tanks’ prior to despatch to the Recovery Plant.

Recycling Plant

The waste material is recycled using a filtration process.

Waste Audit Trail – Plastic Bumpers

Customer

Plastic Bumpers are collected by Hand from our customers premises.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

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The Plastic Bumpers are cleaned and cut into smaller pieces and put through our Plastic Granulator. The shredded plastic is collated and sent to a plastic recovery plant for further recycling.

Recycling Plant

The plastic granules are sent to a Plastic Recycling Company where it is melted and re-extruded into recycled plastic materials.

Waste Audit Trail – Plastic Oil Contaminated

Customer

Plastic Oil Contaminated Waste is collected in labelled, UN approved open top drums from our customers premises.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

pcws Waste Service Solutions

All plastic contaminated containers are left to drain over a UN approved drum. When all remaining waste has been removed the Plastic is placed in our 'Hot Wash' machine before being cut into smaller pieces and put through our Plastic Granulator. The shredded plastic is collated and sent to a plastic recovery plant for further recycling.

All oil is collated and sent for disposal.

Recycling Plant

<u>Oil Recovery Plant</u>

The disposal company uses its own specially constructed refinery to process and treat waste oil.

Through the refining process innovative fuel oil products are produced.

<u>Plastic Recovery Plant</u>

The plastic granules are sent to a Plastic Recycling Company where they are melted and re-extruded into recycled plastic materials.

New recycled products are produced with the granulated plastic.

Waste Audit Trail – Soluble Cutting Oil

Customer

The waste 'Soluble Cutting Oil' is collected in 'UN' approved 205 litre closed top containers.

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The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport, where the waste is transferred to IBC's and held until a 'bulk load' is ready for removal to the Recovery Plant.

Recycling Plant

Soluble oil packages will be emptied by vacuum through a filter into a holding tank. When bulked up, they will be moved by site tanker to a soluble oil reception tank, and discharged (again through a filter), from where they are pumped through to the 'hot settlers'. These are large tanks with heated coils, through which steam passes. The material is then heated up to 70-80 degree's for anything from 12-36 hours until it has 'split'. This is checked using sample taps on the side of the tank.

The water phase is then pumped into the effluent plant, and processed through the water treatment systems and ultimately discharged to sewer.

The oil phase will be pumped from the top, over to the oil processing plant, and blended with other recovered fuels. It is then sold as a recovered fuel oil for use in a variety of industries.

Waste Audit Trail – Steel Drums

Customer

The waste ‘Steel Drums’ are collected from our customers.

The drums are transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

pcws Waste Service Solutions

If the metal drums are free from leaks and suitable to be re-used they are steam cleaned and used again (for same use to avoid contamination).

However, if the metal drums contain too much contaminated waste and leak we use them to place all contaminated metal waste such as crushed oil filers in ready for disposal (see Waste Audit Trail – Oil Filters).

Recycling Plant

45 Gallon drums containing filters are drained for approx two weeks onto a concrete base. Once the filters have been drained they are chopped into small pieces (Frag) along with the metal drums. The Frag’s are smelted down and made into new filters.

The waste is recycled - 100% of the Oil Filter is recycled and recovered

Waste Audit Trail – Thinners

Customer

The waste ‘Thinners’ is collected in ‘UN’ approved 205 litre closed top containers.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport, where the waste is held until a ‘bulk load’ is ready for removal to the Recovery Plant.

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Recycling Plant

The waste material is vacuum sucked out of the containers, distilled off, collected and mixed with various components to produce new thinners.

The containers (Steel IBC’s) and any sludge/residue is ‘squashed’ in a press. The ‘squashed’ drum is shred into small pieces , washed and sent for metal recovery.

The residue left once the metal has been extracted is sent to the cement kilns – it is used as a replacement for fossil fuels.

100% recovery rate is achieved through the various recovery methods (including waste material and packaging).

Waste Audit Trail – Tins (Paint Contaminated)

Customer

All Tins contaminated with paint (UN1263) are collected in labelled, UN approved 205 litre open top drums from our customers premises.

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport.

pcws Waste Service Solutions

Before disposal to the recovery plant all Tins are sorted and drained to remove as much paint waste as possible before the metal is sent for disposal.

The paint waste is collated with other paint waste and sent for disposal (see Waste Audit Trail – Paint Contaminated Waste).

Recycling Plant

The paint tin containers and any sludge/residue is 'squashed' in a press. The 'squashed' drum is shred into small pieces, washed and sent for metal recovery.

The Paint Waste is sent to a treatment site for shredding and used as a secondary fuel

Waste Audit Trail - Oil

Customer

Waste oils are collected in 'UN' approved 205 Litre closed top containers or by Tanker pump out (depending on quantity) and brought back to Pure Clean Waste Solutions Ltd Depots in Stockport. We either deliver the Waste Oils for disposal or the disposal company collect from us.

pcws Waste Service Solutions

Recycling Plant

The disposal company uses its own specially constructed refinery to process and treat waste oil.

Through the refining process innovative fuel oil products are produced.

Waste Audit Trail – Fluorescent Tubes

Customer

The Fluorescent Tubes are placed inside ‘Fluorescent Tube Lamp Holders’

The waste is transported by Pure Clean Waste Solutions Ltd ADR approved vehicles and ADR qualified, fully trained drivers to our depot in Stockport, where they are held awaiting collection from the recovery plant

pcws Waste Service Solutions

To save energy the Tubes are collected and crushed inside the Recovery Plant transportation prior leaving our site.

Recycling Plant

The crushed lamps are fed into a uniquely designed agitator unit that loosens the mercury bearing phosphor powder. The air is filtered through various sophisticated filtration systems before being released into the atmosphere.

The cleaned recycled glass is separated into glass and metal/aluminium fractions, by passing over a powerful magnet.

The Phosphor powder is stored in UN approved drums and dispatched to a highly reputable company who specialise in the recovery and recycling of mercury.