

5.0 Treatment for Reuse



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Audience: This section of the guidance is particularly aimed at treatment and reuse facilities, however other organisations which come into contact with the appliances such as haulage companies and DCF Operators / sources of WEEE may also find it useful.

Benefits: The benefit of implementing the guidance outlined below is that it provides information on sourcing WEEE for reuse. It provides information on systems and processes for optimising the WEEE which is potentially reusable whilst minimising the likelihood of items being returned.

Summary: This section provides guidance on improving reuse activities ensuring maximum value can be gained.

Good practice for the reuse of WEEE involves the identification, handling, testing, refurbishing and sale of items. Traceability of these items is also an important consideration.

5.1 Sourcing WEEE for reuse

At sources of WEEE, and in particular Designated Collection Facilities (DCFs), Operators should have procedures in place for identifying and managing WEEE that has the potential for reuse, in order to minimise any potential damage. These procedures should incorporate systems for WEEE reuse identification, separation, storage, loading and off-loading from vehicles and transportation.

WEEE from businesses or retailers will often arrive at a reuse facility in a better condition than WEEE from DCFs. This is as a result of the identification, storage, handling and transportation processes used by businesses and retailers when handling WEEE. It is also less likely to be exposed to the same conditions as items going through DCF sites. As a result, there is a preference for reuse facilities to source their WEEE for reuse directly from consumers, businesses or retailers rather than DCFs.

Key benefit of taking action

Well trained and motivated staff are crucial to the successful sourcing of WEEE for reuse. Sourcing potentially reusable items can be optimised by staff educating sources of WEEE how to identify items which are potentially reusable.

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Good practice

Examples of sourcing WEEE for reuse considered to be good practice include, but are not limited to:

- developing a 'Selection Criteria Sheet' to help instruct staff on which items are suitable for reuse and how to identify the items that are likely to be functional. This can be provided to staff at the source, i.e. at a DCF, as well as internally at the treatment facility (refer to table on page 3);
- encouraging site staff to ask members of the public whether an item is in working order and accompanied by all accessories such as a remote control;
- liaising directly with DCFs to overcome concerns such as, cables causing trip hazards and the removal of fridge / freezer sealer surrounds. Advice can be provided on placing the cable inside the unit and wrapping tape around it to prevent anyone opening it on site; and
- introducing incentives to DCFs (if it is economically feasible), to help improve the care on site of potential reuse items.

Further information on the sourcing of WEEE for reuse can be found in the *WRAP Good Practice Guide for the Collection of WEEE*.

5.2 Disassembly and storage

Appropriate disassembly of items and storage will increase the potential for reuse and minimise damage.

Good practice

- WEEE with potential for reuse should be separated in a designated area at the DCF and other sources such as business users. In addition, the collection of the WEEE for reuse purposes from DCFs should be scheduled to avoid clashing with the other vehicles servicing the site. The benefit of this is that it protects items which can potentially be reused and ensures that the collections are made at a time which suits the source;
- certain items of WEEE may need to be disassembled for testing, repair and refurbishment prior to sale. In these cases, disassembly should be carried out in a way that minimises the risk of damage. An example of this would be a computer hard drive, which should be disassembled in a controlled environment with care given to avoid damage to both internal and external condition;
- disassembled parts from items not fit for reuse should (where possible) be separated and stored for use as spares in the upgrading of other reusable items, rather than being perceived as scrap;
- the test process and results should be documented for all parts and components that are tested and passed as suitable for reuse; and
- all parts and components that pass the reuse tests should be handled and stored in appropriate containers (such as waterproof, shock resistant etc) to avoid them being damaged.



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5.3 Testing for reuse

Treatment facilities which refurbish WEEE for reuse should have systems in place which facilitate the main reuse equipment qualification tests required. These include:

- implementing documented procedures which describe the methods used for separating WEEE and or components for reuse purposes from those not suitable for reuse so that materials can be traced through the process;
- having a designated area for carrying out tests on WEEE for reuse. This area should be segregated and appropriately equipped to enable tests to be performed on a number of appliances at the same time; and
- simple procedural tests such as 'PASS/FAIL' or, 'GO/NO GO' systems.

Tests that should be carried out on potential WEEE for reuse are described below.

Visual inspection

Visual inspection tests are used to assess health & safety and cosmetic condition of items. The tests should be documented and, as a minimum to meet industry standards, the inspection should identify:

- cosmetic damage: to ensure the item meets a visual standard which can likely be resold;
- furniture is included: for example fridges' internal shelves, salad boxes, trays etc;
- damage: cracks on cases etc;
- no electrical parts should be exposed (including wires);
- missing components or parts that will impair functionality (such as missing cables, remote controls, transformers etc); and
- excessive wear.

Good practice

Examples considered good practice which reuse organisations may implement include but are not limited to:

- development of a Selection Criteria Sheet to help instruct staff which items are suitable for reuse and how to identify which items are likely to be fully functional. This can be provided to staff at the source i.e. DCF as well as internally at the reuse facility;
- visual inspections at the point of collection and arrival on site;
- visual inspections of inside the item as dust and debris can often clog important components and cause overheating. The benefit of this is that it allows the facility to clean any debris which is likely to damage the item;

Type of LDA	Criteria
Refrigeration	No CFC refrigerant No severe front damage and maximum of 'x' missing internal trays or bins No faded appliance No warped appliance
Cookers	No gas appliances No smashed ceramic hobs Minimal front damage No warped appliances No smashed door glass
Washing machines / Washer dryers	Minimal front damage Specific models only
Tumble dryers	Minimal front damage No warped appliances No compact ones
Dishwashers	Minimal front damage No warped appliances Must contain all trays Door catch must be working

Table 4: An example of a selection criteria sheet for reuse of Large Domestic Appliances (LDAs) is provided below:

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- inspections should be documented to provide traceability and knowledge of who conducted the inspections and how. It should provide details of faults or marks found on the item and document the decision for pass or fail for going onto either reuse or treatment options. These can be documented on hard copy datasheets, electronically or on a label or barcode. The benefits of this are that it allows for reuse facilities to monitor the numbers of items returned and, if necessary, increase the robustness of their visual inspections; and
- managing the expectation of clients and ensure they are aware of any potential markings or flaws. This helps reduce the quantity of items which are potentially returned.

Electrical safety test

Tests must be performed to identify the potential risk from electric shocks. As a minimum, to meet industry standards, tests should:

- comply with the International Electrotechnical Commission (IEC) – ‘Code of Practice for In-service Inspection and Testing of Electrical Equipment’¹, which includes tests such as:
 - earth bond continuity tests;
 - insulation resistance tests;
- be documented and provide details on how components, parts and WEEE for reuse purposes are identified and tested.

All test equipment should be calibrated in accordance with manufacturer guidelines and show how components are identified and tested.

Electrical safety tests should be conducted for the appropriate amount of time required to provide sufficient confidence that the item does not pose a risk. The results from the test procedures should be added to the information held on the label or barcode on the item.

Functionality tests

The functionality test process should be documented and show how components, parts and WEEE for reuse are identified and tested.

These tests should identify whether the WEEE is ‘fit for purpose’ to meet its intended use. When items are not fully functional the components should be tested and replaced where necessary to refurbish the item to full functionality. Functionality tests should include:

- checking for signs of overheating; and
- internal inspections: cord security, polarity, connections.

Key benefit of taking action

Clear records of functionality tests help to demonstrate legitimate export for reuse.



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¹<http://www.iec.ch/>



EXAMPLE:

Computer Remarketing Services (CRS): Minimising Reuse Item Returns

CRS is an asset management organisation specialising in I.T. equipment. They are a commercial company handling non-obligated WEEE. They state that over 95% of the equipment they handle is put to reuse.

They implement a number of processes to ensure that the I.T. equipment they handle will be fit for reuse. In the first instance they only source items from businesses and do not accept items from DCF sites.

They have a rigorous inspection and testing procedure to ensure that items are of a suitable quality for resale and in a safe working order with full functionality. When items are assessed and found to have external marks or scratches these are recorded and this information is provided to the end client to manage their product expectation. This reduces the potential for the item to be returned.

They also perform internal checks to ensure the item is clean inside and that no excess dust is present which can damage components, such as cooling fans.

CRS are fully committed to producing a quality reuse product and implement a full traceability system with all their equipment. They record where everything in their warehouse originated and its final destination. This ensures that if items are returned they can review the tests conducted and, where necessary, improve the testing procedures. This continual improvement process ensures that the organisation is continually striving to reduce the quantity of returns they receive.

CRS offer a warranty on all their equipment and operate a money back guarantee.

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Good practice

Reuse facilities should also consider the implementation of the following examples considered good practice, where appropriate:

- conducting functionality tests for an appropriate amount of time to provide sufficient confidence that the unit can undertake its intended function. This may involve turning the item on for an appropriate period of time (this may vary between items);
- undertaking functionality tests using industry recognised predictive diagnostic tools. This ensures that the tests are done to a recognised standard and improves the potential to market the service to potential clients;
- adding test results to the label or barcode. By doing this, the treatment facility can record information such as waste license or exemption number, unique item identifying number and pass or fail date;
- providing warranties with all items sold for reuse. This provides the user with confidence that the item is fit for purpose and if it breaks down, can be returned;
- monitoring the number of items that are returned to treatment facilities for continual improvement purposes. If a high number of items are returned, the checking process should be reviewed and refined where necessary; and
- implementing an acceptable returns policy. This should include a full assessment of any returned item and a money back guarantee for the client.

Data eradication

Good practice

Where applicable, eradication of protected confidential data and copyrighted non-transferable software should be carried out. The data eradication process can be combined with equipment testing procedures. Examples considered good practice in data eradication processes include:

- implementing a high level security system to ensure that no items which can potentially contain sensitive data/information are removed from the process prior to data eradication. Security measures may include: anti-ram gates, CCTV, secure in / out procedures and staff spot checks. These systems also prevent the loss of items through theft;
- ensuring that the data eradication process is in accordance with the Data Protection Act 1998² and done with software to a standard that meets the UK Government Security Services requirements. This ensures that the eradication software can be used for high level sensitive data eradication;
- documenting evidence of the data eradication. Results from the tests should be added to the item's label or barcode for traceability, monitoring and auditing purposes; and
- shredding all hard-drives that are unsuitable for reuse, prior to dispatch for smelting and metal recovery.



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² Available at: http://www.opsi.gov.uk/acts/acts1998/ukpga_19980029_en_1

5.4 Protective packaging of reuse items

Good practice

Packaging for reuse items should be sufficient to protect the items in transit and prevent them from being damaged by other items. Examples of good practice which facilities should consider for packaging include:

- providing sufficient packaging between items (whether packaged individually or as a bundle to reduce movement and prevent damage). Cardboard and film are often used in combination with pallets to provide protection within containers;
- wrapping fragile items such as TV and display screens in cushioned packaging e.g. bubble wrap etc. Fragile items should also be individually wrapped or boxed, then palletised using shrink-wrap to minimise movement during transit;
- ensuring that the packaging used is fit for purpose in terms of being appropriate for the category of WEEE, its size and specific type. It should also be selected taking into consideration the handling and transportation methods used;
- providing staff training in appropriate handling. The benefit of this is that it helps staff appreciate how items should be packaged in a manner which minimises risk of damage; and
- monitoring returned items to identify those that may have resulted from damage during transit. By doing this the packaging systems and materials used can be reviewed and improved if necessary.

5.5 WEEE not suitable for reuse

Good practice

When items are deemed not suitable for reuse due to cosmetic, safety or functionality reasons, reuse facilities should ensure that the items are treated in a responsible manner. Examples of good practice which should be considered include:

- examining all items that are not fit for reuse to identify any components or parts that can be used to help refurbish other items. The benefit of this is that it optimises the quantity of WEEE which is reused;
- placing all unwanted or failed WEEE not fit for reuse back into the WEEE system in order to be treated or sent for treatment by an ATF, enabling evidence to be issued on obligated B2C WEEE; and
- avoiding the double counting of items in recycling rates by monitoring and reporting all items that are returned back into the system.

EXAMPLE:

AQUAFORCE Ltd: Prioritising Reuse in the UK

AQUAFORCE is a small AATF and Reuse AATF that only allows its reuse items to be used within local and national markets. This helps them to control and track the WEEE items they sell for reuse, and ensure the EEE is indeed reused. They source their WEEE from both DCFs and businesses.

Instead of providing test and repair on site, they supply their clients with WEEE for reuse that has been selected according to set criteria determined by their clients (such as no front damage, no warped appliances, no gas appliances, no smashed ceramic hobs). Once in receipt of the WEEE for reuse, the clients will then apply their own test and repair procedures.

They select their reuse partners by visiting their sites, making sure they only sell within the UK, and that they carry out the appropriate tests and repair procedures.

By using this priority system, AQUAFORCE is able to manage, track and ensure that the WEEE (appropriately tested) has been sold for reuse. Any items which are not reusable are returned to AquaForce to be treated and or recycled.

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5.6 WEEE reuse in the UK

Good practice

Some treatment facilities implement processes to ensure that their reuse items remain within the UK. This gives them confidence that the items are not being illegally exported and that they can be traced to their final destination. Examples of good practice for ensuring WEEE is reused in the UK include:

- giving priority to local or national end markets for their reused EEE, such as directly to end users via shops, the internet or to businesses. This allows treatment facilities to trace items and easily identify their end destination;
- treatment facilities which do not themselves refurbish or reuse items, should work with a manageable number of reuse facilities to ensure that they can manage, audit and trace their reuse items; and
- conducting audits or spot checks to ensure that the items are being used as per the criteria issued by the treatment facility to the reuse organisation.

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