A complete guide to setting up a lamp recycling programme for your business.

Recyclite

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Introduction

Fluorescent lamps are now widely used within office, manufacturing and commercial premises of all types.

As well as providing an efficient lighting source, fluorescent lamps use only 25% of the energy of equivalent incandescent bulbs, and last up to ten times longer.

However, their design employs **Mercury**, a highly toxic element harmful even in very small amounts. For example, there's enough Mercury in a typical fluorescent tube to contaminate 30,000 litres of water, making it unsafe to drink for people or animals.

Broken or disposed of carelessly, fluorescent lamps can release Mercury into the air, water and soil, resulting in risks to both the environment and public health.

Therefore, while the use of fluorescent lamps benefits the environment during their operating life, their disposal requires care and is now subject to strict government regulation.

This guide is designed to provide you with all the information necessary to set up an efficient lamp recycling programme.

Following these guidelines will ensure that your company both complies with government waste regulations, and is able to meet its Health & Safety obligations to staff.

In addition, these guidelines will be of assistance if you're seeking accreditation under **ISO 14001**.

Know your Legal Obligations

In July 2005, important changes were introduced to the **Hazardous Waste Regulations**, upgrading spent fluorescent tubes, sodium lamps, computer monitors and TV's to hazardous waste.

If your business uses fluorescent or sodium lighting, runs computer or TV equipment, it is now considered a **producer** of hazardous waste.

Under the 2005 regulations, producers of hazardous waste can no longer dispose of these items along with general waste. To do so is illegal, and leaves your organisation open to court proceedings with fines of up to **£5,000**, and on-the-spot fines of **£300**.

In addition, hazardous waste such as lamps, computer and TV equipment can only be stored on the premises on which it was created for a maximum period of **three months**. Storing the waste beyond this time is a further offence.

All producers must **register** annually with the Environment Agency (EA) before they can dispose of hazardous waste.

The EA now advises recycling companies to check that the premises they collect from are registered. If they're not, the carrier should refuse to take the waste and report the premises to the EA.

You must also be able to demonstrate that you have transferred all hazardous waste to an **accredited** third party or risk prosecution by the EA.

The most critical proof of this is a **Hazardous Waste Consignment Note**. It is this note that transfers your responsibility for disposal of the waste to the third party, and provides onward accountability for the waste producer as required by the new regulations.

Understanding your Requirements

Completing an assessment of your premises is the first step in setting up a recycling programme.

Collecting this information will help you select a recycling service that is practical, cost effective and requires minimal administration.

You should consider the following questions:

- How many lamps containing Mercury are used annually within your company?

  Remember that these include fluorescent, high pressure sodium, mercury vapour, metal halide and neon lamps.

  You should also consider sodium lamps within your recycling programme since these also represent a disposal problem.

- Where are these lamps located?

  If you have a floor plan of your offices, it's a good idea to mark up their location.

- How do you currently dispose of spent lamps?
- How many lamps do you dispose of each month?
- How are you handling and storing lamps?
- Do you have a procedure for handling broken lamps?
- Who is responsible for lighting maintenance within your company?

Your Storage Options

An important aspect of your recycling programme will be providing safe storage for spent lamps prior to their dispatch for recycling.

It is recommended that lamps are stored in a container designed for this purpose, and which can be sealed prior to despatch to the recycler. This eliminates unnecessary lamp handling and potential breakages.

Recycling containers should be of sturdy construction, allowing safe storage and transport. They should be supplied with a lid so that lamps can be deposited without the risk of breakages or injury.

Recycling containers should be suitably labelled to identify their use and potential hazard.

You will need to select a suitable location for the recycling container.

Larger sites may require a number of smaller containers strategically located around the site. This approach has several advantages over traditional bulk containers:

- Smaller quantities present less of a storage problem.
- The risk of breakages is reduced. Even if a breakage occurs, the release of Phosphor powder and Mercury vapour is confined within smaller containers. Once a box is full the lid stays in place, and further lamps are placed in a new box.
- Larger containers increase the possibility of Phosphor and Mercury leakage onto the surrounding area.
- Smaller containers can be easily handled without lifting equipment.
- If bulk storage is appropriate, you'll need to consider site access and the facilities available for loading/off loading recycling containers.
- You'll also need to consider if you require the container to be stored in a secure location.

Should you Crush Lamps Onsite?

Equipment is available today that enables you to crush lamps on your premises, after which the recycling company collects the crushed waste for recycling.

This option may appear to be attractive in reducing storage space and the risk of breakages. However, it also exposes your staff to **Health and Safety** risks that you may wish to avoid.

Crushing lamps releases Phosphor dust and Mercury vapour.

While current equipment does have features to contain this hazard (primarily by creating a vacuum inside the machine), it's **your responsibility** to ensure this aspect of the equipment is working correctly.

Filters are fitted to maintain a negative pressure within the equipment, however, they are expensive to replace and obviously expose the operator to high levels of Mercury and Phosphor during replacement.

Judging the correct interval for filter replacement is another area of concern.

In addition to technical issues associated with the equipment itself, you may **require a licence** from the Environment Agency to crush lamps on-site.

You will need to **monitor the Phosphor dust and Mercury vapour levels** in the surrounding area to ensure they remain within safe limits.

You will need to monitor the bloodstream Mercury levels of your personnel. This involves an **annual urine test** as a minimum.

Crushing lamps on-site presents an obvious hazard with broken glass, and you are responsible for the safety of your personnel.

Safety spectacles and suitable protective gloves are a **minimum requirement**.

Selecting an Accredited Recycler

To ensure your lamp recycling programme complies with current government legislation, it's your responsibility (as a producer of hazardous waste) to select a recycling company with the necessary **accreditations**.

All lamp recycling companies in the UK must hold the following licenses issued by the Environment Agency (EA):

Licensed Waste Carrier

They must be licensed as a Carrier of hazardous waste under the Control of Pollution Act 1989.

Licensed Treatment Plant

Their processing facilities must be licensed as a Treatment Plant for hazardous waste under the Environmental Protection Act 1990.

Licensed Transfer Station

Their premises must be licensed as a Transfer Station for hazardous waste under the Environmental Protection Act 1990.

Approved Authorised Treatment Facility (AATF)

Where necessary, their premises must be licensed under the Waste Electrical and Electronic Equipment (WEEE) Regulations 2006 as an Approved Authorised Treatment Facility (AATF).

In addition, most reputable recycling providers will be ISO certified:

ISO 9001 Certification

Certification under ISO 9001:2000 allowing for the collection, crushing, cleaning and separation of the components of spent fluorescent tubes and sodium lamps for the purpose of reclaiming the materials for recycling.

ISO 14001 Certification

Certification under ISO 14001 in meeting the standards required for the effective implementation of an Environmental Management System (EMS).

Finally...

Always deal with real recycling companies and avoid the middle-men.

Setting up a Recycling Programme

The following steps should be used as a guide in setting up a lamp recycling programme for your company:

- Designate an area within your organisation to store used lamps.

  Larger organisations may need more than one storage location.

- Consider if your storage facility needs to be in a secure location and accessed only by authorised personnel.

- Appoint a member of staff who will be responsible for managing the storage facility.

- Agree the necessary procedures for accessing the storage containers.

- Review all the health and safety issues relating to the storage of hazardous waste. Frequent removal of used lamps rather than bulk storage is worth considering.

- For storage in bulk, ensure loading and delivery requirements (e.g. folk lift access) are met.

- Inform your employees about the dangers of Mercury contained in fluorescent lamps and explain your recycling programme.

- All employees and contractors involved in the recycling programme should be trained in the safe handling of these items.

- Document and distribute procedures for dealing with accidental lamp breakages.

- Ensure a **Hazardous Waste Consignment Note** is raised for each shipment of waste. Your authorised representative and the recycling company's driver should sign this on collection. One copy should go with the driver and one kept on site as a record of despatch.

- Ensure accurate records are maintained showing each movement of hazardous waste. These may be required by officers of the Environment Agency.

Still have Questions?

As the UK's largest independent lamp recycling company, no-one has more experience of implementing successful recycling programmes than us.

So why not call our **Advice Line** on **01953 451 111** or visit our website at **www.recyclite.co.uk**.