

MAGB HEALTH, SAFETY & ENVIRONMENT GROUP



Environmental Best Practice

WASTE MANAGEMENT

***SCOPE:** This document represents best practice advice available and considered pertinent after consultation within the membership. It is intended to assist member companies wanting to adopt waste management best practice.*

1. INTRODUCTION

The malting industry gives rise to various waste streams and co products; these are in general generated during normal malting activities, (barley intake drying and storage, malt production, storage, blending and dispatch), but can also arise during maintenance and project activities. Barley screenings, barley dust/husks, malt culms, malt dressings and dust (co-products) are normally sold either individually or combined and pelleted for ease of storage and transport. When combining barley screenings, or large substance (straw, un-thrashed ears, peas & beans etc.) produced by barley dressers with culm and dust for pelleting, it is sometimes necessary to mill prior to pelleting. However sometimes due to location or circumstances some of these products are disposed of as waste. Malting also produces waste water from process and cleaning activities. General cleaning, leaking equipment and breakdowns can produce wet and dry barley and malt waste. Along with the normal malting process; projects, maintenance, laboratory, office and canteen activity can give rise to both hazardous and controlled waste of various descriptions. It is essential to have good waste management processes in place for the sake of the environment, and both cost management and legal compliance.

2. LEGAL REQUIREMENTS (England/Wales and or Scotland as listed, not exhaustive, below)

Environmental Protection Act 1990 and Environment Act 1995 aims to regulate waste disposal, and gives rise to the EA & SEPA

Environmental Protection (Duty of Care) Regulations 1991 (DOC) requires that waste is only disposed of by licenced carriers and disposal sites via documented (DOC) procedures to protect the environment.

Controlled Waste (England and Wales) Regulations 2012 and amendment Regulations 2012 & Controlled Waste Regulations 1992 and (Amendment) Regulations 1993 (in Scotland), defines the categories of maltings waste that fall under the requirements of duty of care

Hazardous Waste (England and Wales) Regulations 2005 and (Amendment) Regulations 2009 (HWR) & Special Waste Regulations 1996 and amendment Regulations 1996 and 1997, Special Waste (Scotland) Regulations 1997 and Amendment (Scotland) Regulations 2004 defines special (hazardous) wastes
Waste Electrical and Electronic Equipment Regulations 2006 (WEEE) and (Amendment) Regulations 2007, 2009, 2010 also Waste Batteries and Accumulators Regulations 2009 and Waste Batteries (Scotland) Regulations 2009 aims to make producers responsible to reduce this type of waste going to landfill and improve recovery and recycling rates.

Waste Management (England and Wales) Regulations 2006 & Waste Management Licensing (Scotland) Regulations 2011 requires that only licenced (or exempt) companies are used for waste disposal, also companies moving their own waste must be registered carriers.

Environmental Protection (Disposal of Polychlorinated Biphenyls and other Dangerous Substances) (England and Wales) Regulations 2000 and (Amendment) Regulations 2000 (also applies in Scotland)

Producer Responsibility Obligations (Packaging Waste) Regulations 2007 and (Amendment) Regulations 2008, 2010 where applicable, aims to encourage producers to recover and recycle packaging materials. etc..etc....

3. STEPS TO IMPLEMENT WASTE MANAGEMENT

Most companies will already be managing waste to some extent and have a level of awareness and competence on site. For effective waste management it is important that awareness and competence is generated at all levels appropriate to the degree of involvement with the waste management system. (i.e. putting the correct waste in the appropriate receptacle, or ensuring the correct duty of care paperwork is in place.)

3.1 IDENTIFY AND MEASURE ALL WASTE STREAMS – this could include

- Barley and malt dust and spillages from intake, out loading and the malting process
 - i. This could be further classified as wet or dry.
- Out puts from effluent pre or full treatment
 - i. Waste water
 - ii. Thin corns, swimming's and rootlets from effluent screening
 - iii. Sludge, thickened and un thickened
- Office/Kitchen Waste/Laboratory
 - i. Paper
 - ii. Card
 - iii. Plastic
 - iv. Glass
 - v. Food waste
 - vi. Batteries
 - vii. Printer cartridges
 - viii. Waste electrical equipment
 - ix. Waste chemicals from laboratory analysis and activities
- Maintenance Activities
 - i. Waste Oil & Grease
 - ii. Oily rags
 - iii. Empty Aerosol cans
 - iv. Scrap Metal
 - v. Fluorescent tubes
 - vi. Asbestos waste

3.2 ADOPT THE WASTE MANAGEMENT CONCEPT _ REDUCE, REUSE, RECYCLE

- REDUCE
 - i. Prevent spillages, repair, renew, replace equipment
 - ii. Reduce water usage, optimise effluent treatment
 - iii. Examine current practices and methods is there a nil or low waste option
 - iv. Specify/select minimal packaging
 - v. Only print if necessary, then double sided, black and white
- REUSE
 - i. Spillages immediately returned to process where possible, alternatively combined with co-products for sale as feed, or sent for composting.
 - ii. Maximise screener/dresser outputs as co products
 - a. Check calibration and efficiency of equipment
 - b. Screenings sold as feed barley
 - c. Dust, rootlets, husks as bulk or pelleted to animal feed
 - iii. Explore biofuel, bio energy options available

- RECYCLE
 - i. Segregate waste streams (as identified above) and recycle where possible.
 - a. Provide clearly marked suitable receptacles, to keep waste secure, clean (dry), prevent contamination and bunded where appropriate.
 - b. Ensure hazardous wastes are kept separate from controlled wastes.
 - c. Ensure waste collection areas are secured to prevent unauthorised use, and provided with spill kits and clean up tools as appropriate.
 - ii. Where general waste (land fill) is removed from site, ensure utilisation of a waste management company that employs secondary sorting and segregation via a waste management centre.

3.3 AWARENESS, INVOLVEMENT & COMPLIANCE

- Designated person(s) should be trained (or competent expertise sought) to ensure the legislative, licencing and documentary requirements applicable to the region (and waste in question) are fully understood and documentary evidence is kept available on site.
- All site personnel should be given training and awareness, to understand and appreciate the benefits to the company and the environment of an effective waste management system and generate buy in to 'Reduce-Reuse-Recycle'
- All site personnel should be given training and awareness in the operation of the waste management system, segregation of waste streams, controlled vs hazardous waste, disposal in the correct receptacle, what to do in event of emergency,(i.e use of spillage kits)
- All site personnel should receive regular feedback and communication regarding the waste management system's progress towards minimisation targets and KPI's, to generate commitment, interest and seek suggestions for actions and initiatives to improve
- The waste management system should be subject to regular audit, physical inspection of the waste collection areas on site to ensure they are kept tidy and secure and there is no contamination of the waste, and documentary to ensure compliance to legislative requirements, progress of KPI's and targets and effective communication on site.

5. FURTHER INFORMATION

Is available from the EA website on the following link:

<http://www.environment-agency.gov.uk/business/topics/waste/default.aspx>