

## **WASTE TREATMENT TECHNOLOGIES HLA**

### **Award – Overview**

#### **MANDATORY UNITS**

All candidates must complete 5 mandatory Units as follows:

#### **Unit 1 – Historical, Social and Legal context for Sustainable Waste Management**

##### **Legislation and Other Drivers**

- Outline the history of waste management in the UK and why particular disposal techniques were used
- Detail European and UK legislation that has led to the need to reduce the landfilling of biodegradable waste and to treat waste prior to landfilling
- Discuss typical recycling/composting targets
- Identify other drivers causing a shift away from landfill
- Explain why biodegradable waste needs to be treated or disposed in ways other than by landfilling

##### **Decision Making**

- Evaluate scientific and trade literature relating to the different technologies
- Identify potential advantages and disadvantages of particular technologies
- Communicate findings and conclusions of technology assessments/comparisons to expert and lay audiences using written/verbal presentations
- Make technical and financial appraisals of proposed new projects and processes
- Prepare cases for the adoption of a particular technology or combination of technologies

##### **Licensing and Permitting**

- Outline the planning and permitting systems as applied to advanced waste management facilities
- Identify potential barriers to the implementation of the particular technologies at particular locations
- Determine likely monitoring and reporting requirements for the operation of advanced waste management facilities

**The learning outcomes are the same for each of the four technology units  
and can be found after the unit titles overleaf.**

**CONTINUED OVERLEAF**

**Unit 2 – Physical Waste Management Technologies**

**Unit 3 – Biological Waste Treatment Technologies**

**Unit 4 – Advanced Thermal Waste Treatment Technologies**

**Unit 5 – Integrated Treatment Technologies for Waste Management**

- Describe the scientific and engineering principles of each technology
- Critically appraise current waste treatment technologies and discuss the differences between processes
- List the waste and wastes streams suitable for treatment through each technology
- List the environmental benefits and emissions/products associated with the processes
- Discuss the extent to which the technology can assist in meeting targets for the diversion of BMW from landfill and for meeting other targets
- List the benefits and limitations of the technology