

## **VRQ LEVEL 3**

# **THE PRINCIPLES AND PRACTICES OF SUSTAINABLE WASTE MANAGEMENT**

### **Award – Overview**

### **MANDATORY UNITS**

All candidates must complete **6** mandatory Units as follows:

#### **Unit 1 - Principles of Sustainability and its impact on Waste Management**

- Illustrate how waste management fits with sustainable developments
- Describe the waste hierarchy and what is meant by sustainable waste management (including any limitations in common definitions)
- Identify where, within the waste management hierarchy, any particular technology sits

#### **Unit 2 – Waste Generation in the UK**

- Identify the different types of waste and their sources
- Explain the factors affecting the nature and quantity of waste arisings and general trends over time

#### **Unit 3 – Waste Management Policy and Legislation**

- Discuss the history of waste management in the UK
- List and discuss European and UK legislation that has led to the need to reduce the landfilling of biodegradable waste and to treat waste prior to landfilling
- Identify other non-legislative drivers causing a shift away from landfill
- Explain why biodegradable waste needs to be treated or disposed in ways other than by landfilling

#### **Unit 4 – Roles and Responsibilities of Stakeholders involved in Waste Management**

- Explain the planning and licensing/permitting system applied to waste management
- Explain the concept of producer responsibility (Duty of Care)
- Identify the roles and responsibilities of different tiers of government with respect to waste planning, collection, treatment/recycling and disposal

**CONTINUED OVERLEAF**

## **Unit 5 - Technical Aspects of Waste Management**

- Outline the different systems available for waste collection and their implication / role in terms of subsequent waste processing
- Discuss the recycling technologies applied to different materials
- Discuss the scientific and engineering principles of the above processes
- Explain how the different processes can be used for the treatment of biodegradable wastes to achieve more sustainable waste management and meet European and UK biodegradable municipal waste diversion targets
- List the benefits and limitations of the different processes and any particular problems relating to the processing of biodegradable wastes using the different technologies
- Discuss the emissions and products associated with the process
- Explain the technical, financial, planning and other barriers limiting the uptake of the different technologies
- Identify potential barriers to the implementation of the particular technologies at particular locations
- Communicate knowledge, ideas and conclusions about the different technologies to expert and lay audiences using written / verbal presentations

## **Unit 6 – Health and Safety in Waste Management Industry**

- Outline general health and safety principles
- Demonstrate the ability to recognise unsafe practices and potentially hazardous practices
- List the specific health and safety issues related to advanced waste management technologies