



Unit Title	Management of waste in the water industry (R/506/1615)	
Level	4	
Credit Value	12	
Learning Outcomes – the learner will be able to:	Assessment Criteria – the learner can:	
1. Understand the key sources of wastes in the water industry	1.1	describe the key sources of waste produced within the water industry.
	1.2	explain the difference between process generated and natural waste.
2. Understand the impact of waste management legislation and its influence on waste strategy	2.1	explain the main purpose of waste management and relevant pollution control legislation.
	2.2	explain the impact of current legislation on water industry operations.
	2.3	explain how legislation and other business pressures can influence waste treatment, handling, recycling and disposal operations.
	2.4	describe a typical waste control and management system for: (a) a large waste water treatment works (WwTW) and (b) a large water treatment works (WTW).
3. Understand the principles of waste management	3.1	describe the benefits of waste segregation.
	3.2	describe how wastes are segregated and their typical destiny in terms of recycling or disposal.
	3.3	describe how treatment processes can minimise waste transportation cost.
	3.4	explain the control measures for waste incineration and emission and the reasons for them.
	3.5	describe uses of waste water treatment works final effluent.
	3.6	describe treatment of waste water treatment works final effluent, including ultra-filtration and disinfection.
	3.7	discuss and compare the advantages and disadvantages of two disinfection processes.
	3.8	describe methods of storage and distribution of waste water treatment works final effluent.
	3.9	describe typical sampling, monitoring, control and recording regimes .

Additional information about the unit	
Unit purpose and aims	<p>This unit will allow learners to develop knowledge of the scientific concepts and issues that underpin the theory and practice of waste management.</p> <p>On completion of the unit the learner will be able to:</p> <ul style="list-style-type: none"> • explain key scientific factors in the management of wastes. • explain the principles of pollution monitoring.



	<ul style="list-style-type: none">• explain the principles of pollution control.• evaluate a pollution control waste management system.
Unit expiry date	31/03/2019
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>In the assessment of this unit, the learner must ensure that the evidence that they produce covers the following:</p> <ol style="list-style-type: none">1. The learner must describe four key sources of waste produced in the water industry.2. The current legislation that impacts on water industry operations must include:<ol style="list-style-type: none">(a) Sludge (Use in Agriculture) Regulations 1989(b) Environmental Permitting Regulations 2010(c) Environmental Protection Act 1990(d) Landfill Regulations 2002(e) Hazardous Waste Regulations 2005.3. The legislation and other business pressures that influence the handling, recycling and disposal of waste must include:<ol style="list-style-type: none">(a) odour control(b) noise control(c) traffic management(d) light pollution(e) pest control(f) cost (e.g. landfill tax, landfill gate fees).4. Typical sampling, monitoring, control and recording regimes must cover regimes for:<ol style="list-style-type: none">(a) domestic and maintenance generated wastes(b) waste water screenings, grit and FOG(c) treated and de-watered bio-solids(d) imported bio-solids. <p>The assessment of this unit will be via a combination of centre-devised assignments and tests, and will be conducted in supervised conditions. The assessment strategy for the unit has been agreed with industry stakeholders.</p>
Location of the unit within the subject/sector classification system	4.1 Engineering
Name of the organisation submitting the unit	CABWI Awarding Body
Availability for use	Shared
Unit guided learning hours	48



Level 4 Water