

WAMITAB Level 4 Certificate in Waste and Resource Management

Maximum Guided Learning Hours: 150

Total Qualification time: TBC

Total Credits: 19

Qualification Code: 601/2388/6

WAMITAB Code:

4WRM6a (Physical Treatment)

4WRM6b (Biological Treatment)

4WRM6c (Thermal Processing)

4WRM6d (Land Remediation)

4WRM6e (Inert Landfill)

4WRM6f (Mechanical Biological Treatment)



Version 6, December 2016

About WAMITAB and this Qualification Handbook

About WAMITAB

WAMITAB is an awarding organisation and charity that develops qualifications for those working in resource management and recycling; cleaning; street cleansing; facilities management; and parking from operative through to management level.

Since it was formed in 1989, WAMITAB has evolved in line with the convergence between the sectors with a clear focus on promoting and supporting environmental sustainability. With over 120 qualification pathways and 70 quality assured centres, WAMITAB offers an unrivalled specialist network to support staff development.

Equal Opportunities

WAMITAB supports the principles of equal opportunities and we are committed to meeting these principles in the provision of all our qualifications and assessments. We firmly believe that all learners and stakeholders are therefore entitled to receive equal treatment irrespective of age, sex, race, marital status, religion, disability or sexual orientation.

The Purpose of this Qualification Handbook

Welcome to your WAMITAB Qualification Handbook. This will help you to complete your Level 4 Certificate in Waste and Resource Management.

- The units you need to achieve to complete your qualification.
- Information about your responsibilities as a candidate.
- Reference information covering each learning outcome and assessment criteria.
- Activities you can use to test your understanding.
- Forms you can use to record and organise your evidence.

Candidate Information

Name

WAMITAB Candidate Number

Registration Date

Enrolment Date

Centre Name

Centre Address

Centre Contact

Tutor Name

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Frequently Asked Questions

What is a qualification?

A qualification is nationally recognised, based on National Occupational Standards and gained in the workplace. Achieving your qualification demonstrates that you can work to the standards expected by employers in your industry.

What is the objective of this qualification?

This qualification is delivered using the classroom based 'taught and tested' route, making it a great qualification for those who want to formalise their knowledge and skills in the waste industry without having to complete an observation onsite. Learners can also choose from a range of optional units tailored to the specific activity on their site.

Who is it for?

- New entrants to the industry that want to progress onto a degree
 - Graduates preparing to work in the industry
 - Operatives, team leaders, supervisors or managers
 - Experienced workers seeking a formal qualification
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What are the entry requirements of this qualification?

This qualification is open entry. This means that learners interested in undertaking the WAMITAB Level 4 Certificate in Waste and Resource Management do not require any other qualifications or levels of attainment. This qualification is delivered using the classroom based 'taught and tested' route so you do not need to be employed in a suitable position to undertake this qualification.

What job role could this qualification lead to or support?

This qualification is ideal for new entrants, graduates or experienced workers that want to develop their career within the waste and resource management industry through further learning. It is a flexible qualification that can be tailored to meet the requirements of specific job roles (such as site manager, supervisor or team leader) in the sector or a particular organisation.

This qualification will support the sector to overcome significant skills gaps as 65% of all new business start-ups in the energy production and utilities sector in 2009 were created in the waste management industry, giving an indication of the rapid growth this industry has experienced and the potential demand for this qualification in the future.

What do I need to achieve?

To achieve this qualification, you must complete a minimum of 19 credits to achieve the qualification. This should be made up of 16 credits from the Mandatory Group and 3 credits from the Optional Group:

Mandatory Group

- Unit: WRM1 - Environmental Protection in Waste and Resource Management
- Unit WRM2 - Communication, interaction and influence of Stakeholders and other non-legislative factors within Waste and Resources Management
- Unit WRM3 - Legislation to support the Operation of a Waste and Resources Management Facility
- Unit WRM4 - Health and Safety Principles and Practices in the Waste and Resource Management Sector
- Unit WRM5 - Principles of Sustainable Waste and Resource Management

Optional Group

- Unit WRM6e - Principles and Practices of Managing an Inert landfill
- Unit WRM6d - Principles and Practices of Managing Land Remediation Activities
- Unit WRM6c - Principles and Practices of Managing Thermal Processing for Waste and Resources
- Unit WRM6B - Principles and Practices of Managing Biological Treatment Processes for Waste and Resources
- Unit WRM6a - Principles and Practices of Managing a Physical Treatment Processing Facility for Waste and Resources
- Unit WRM6f - Principles and Practices of Managing a Mechanical Biological Treatment Facility

What is a unit?

The units of a qualification describe what you must be able to do and understand to perform work activities competently in your job role.

- Learning outcomes: Describe what tasks you will be able to do as a result of learning.
- Assessment criteria: Describe what activities you will need to do and what you must know to complete each task.
- Evidence requirements: Provide a summary of the evidence you will need to prove you are competent.

What is an approved WAMITAB Centre?

You will gain your qualification through an approved WAMITAB Centre. It may be your place of work, a local college or training provider. Assessment of your qualification will be carried out at your place of work and the centre is responsible for the administration. Centre staff will therefore:

- Register you with WAMITAB.
- Provide a candidate registration number.
- Apply for your certificate when you have completed your qualification or units.

How long will it take?

There is no time limit set by WAMITAB for you to complete your qualification. However, your centre may also have some requirements that they will explain to you.

Who will help me achieve my qualification?

The following people at the approved WAMITAB centre will help you to achieve your qualification.

Your Tutor

The tutor is the person you will have the most contact with as you work towards your qualification. They will provide the training.

Internal Quality Assurer

The internal quality assurer maintains the quality of assessment within the centre.

External Quality Assurer

An external quality assurer is employed by WAMITAB to ensure that your centre meets the required national standards for quality and assessment.

What are my responsibilities as a candidate?

As a candidate you will need to:

- Provide your centre with your personal details so they can register you with WAMITAB.
- Comply with health and safety law and regulations.

What steps will I need to take to complete my qualification?

1. **Planning:** Your tutor will tell you about the mandatory units of the qualification.
2. **Learning:** You will spend time with your tutor and this workbook developing your knowledge.
3. **Assessment:** Your centre will set assignments or exams.
4. **Achievement:** Once you have completed all the units and gathered all the evidence you need, your centre will apply for your WAMITAB certificate.

What are the evidence requirements for this qualification?

The primary sources of evidence for this qualification will be the results from your assignments.

Where do I go if I need more information about my qualification and assessments?

- your tutor
- your qualification workbook
- WAMITAB (01604 231950/ www.wamitab.org.uk/info.admin@wamitab.org.uk)

Useful Words

Approved Centre

WAMITAB Centres are training organisations that have met our strict quality standards and have been approved to deliver our qualifications to learners. They include private providers, colleges of further education, employers and prisons.

Assessment Criteria

These specify the standard that you are expected to meet to demonstrate that you have achieved the Learning Outcome. Assessment criteria are detailed enough to allow judgments to be made about your competence.

Assessor

A person who works with the Approved Centre to assess your competence against the standards set within the qualification. Assessors are qualified and experienced in the subject of the qualification you are registered for, and have the skills to plan and carry out your assessments. They will make judgments of your competence, based on the evidence you provide, and give feedback.

Competence

Competence, in relation to the qualification, describes your ability to consistently be able to undertake work activities, know and understand work-related tasks as per the requirements set out in the standards.

Evidence

You need to collect evidence to prove that you are competent as required by the standards set in the units of the qualification. There are different types of evidence, ranging from an assessor observing your work, question and answers, assignments and tests. Evidence can also be presented using photographs, audio and video files. Each unit gives guidance as to what is expected and acceptable evidence. Evidence must be authentic and your own work.

External Quality Assurer

This is an expert employed by WAMITAB to monitor, review and advise Approved Centres. The External Quality Assurer regularly visits the Approved Centre to check that all assessments are carried out correctly, to the same standard, and that all paperwork is maintained accurately and consistently. External Quality Assurers are qualified and experienced in the subject of the qualification that you are registered for. They therefore have the skills to check that the Approved Centre is operating properly and has all of the systems in place to deliver the qualification.

Internal Quality Assurer

A person who works with the Approved Centre to make sure that the assessment is carried out correctly, and that all administration of the assessment is properly managed. Internal Quality Assurers are qualified and experienced in the subject of the qualification that you are registered for, and have the skills to verify the work of the assessor for accuracy, quality and consistency.

Learner

A person who is registered to work towards achievement of a qualification – i.e. you!

Learning Outcome

These set out what you will be expected to know, understand or be able to do. Each learning outcome relates to one or more assessment criteria, and together they set a clear assessment standard for each unit.

Portfolio

This is a place where you will collect evidence to demonstrate your competence. A portfolio could be either hard-copy or electronic, but this will need to be agreed with the Approved Centre in advance. The evidence held in your portfolio must be your own work, and be clearly referenced to the units of the qualification.

Unit – Mandatory and Optional

Units form the building blocks of all qualifications that are nationally regulated. Units are small chunks of learning that focus on specific aspects of knowledge, skills and understanding. Mandatory units are those that you must achieve, and Optional units offer a range of subjects that you may choose between.

Vocational

A qualification is vocational when it relates directly to the skills, knowledge and understanding required to undertake a specific or broad job role.

WAMITAB

An Awarding Organisation for a wide range of qualifications in waste management and recycling, cleaning and street cleansing, facilities management and parking. WAMITAB is responsible for ensuring the on going quality of the delivery and assessment of qualifications, and issues certificates to learners upon completion. We have over 25 years of experience developing and quality assuring qualifications, training and course materials

Unit Terms

Analyse

Look at something (for example a process) and use given classifications or principles to gain a further understanding.

Apply

Put something into action – a “doing” task which requires “real” evidence from a workplace scenario.

Compare

Look at the characteristics of an item or activity and note the similarities and differences. This is more often used at level 1 and 2.

Critically Compare

Look at the characteristics of an item or situation, note the similarities and differences and their respective positive and negative aspects. In some cases, this can include the use of the comparison in context as the basis for decision making. This is generally used at level 3 and above.

Demonstrate

A doing verb which requires you to actually do what the assessment criteria requires. You will have to provide evidence of which clearly shows you applying your knowledge and skills to meet the requirements of the assessment criteria. The evidence for this can involve getting someone to take a picture of you completing the task or discussing the task with an assessor and recording the discussion using documentation, video, etc. Remember that it is not enough to just write about it unless the task requires this type of written evidence.

Describe

Provide a vivid picture of what it is by using imagery, adjectives and adverbs to make the subject easy to understand. It may also convey an idea or fact.

Determine

To find out or decide. This may involve research, following a set of procedures or carrying out a series of calculations to find a solution.

Develop

Build a process or activity or understanding either from scratch or using an existing product to create something workable.

Differentiate/ Distinguish

Look at the characteristics of an item or situation/ activity and explain the differences.

Evaluate/Justify

You must look at whatever the required content/process is and suggest other relevant, significant or possible outcomes. It is the process of exploring, checking and suggesting a likely outcome with reasons.

Explain

Provide a comprehensible answer that shows an understanding of the content/process mentioned. Your answer should include: what it is, how it works, what it looks like, what it does, how it happens, why it happens and any relevant reasons.

Identify

For most assessment criteria this requires the learner to list and describe what is required or relevant to produce an outcome, or requires the learner to make choices to achieve a particular aspect of their job. At levels 4, 5 and 6 this would require the learner to say what is available, make the choice and then to explain or justify why the choice was made.

Implement

Putting something into practice after the development process has taken place. This ensures that the product/process is actually employed and/or used by self and others during work activities.

List

Produce a number of relevant items which apply to the question. Further description is not required.

Manage

After a development process ensure that the product/process works using relevant management techniques.

Recognise

Be aware of, familiar with and able to identify an activity or product.

Mandatory Units

WRM1: Environmental Protection in Waste and Resource Management

Level: 4		Evidence Type	Results	Comments
Credit Value:3				
Learning Outcome	Assessment Criteria			
1. Understand the principles of sustainable waste management	1.1 Explain the meaning of the term “sustainable waste management”			
	1.2 Summarise three principles of sustainable waste management			
	1.3 Describe two factors or issues that could prevent waste being managed in the most sustainable manner			
2. Understand the Waste Hierarchy and its application in the sustainable management of waste and resources	2.1 Describe the Waste Hierarchy			
	2.2 Explain the five stages within the Waste Hierarchy			
	2.3 Identify one treatment method under each of the following headings: Physical, Chemical ,Thermal, Biological			
	2.4 Explain which stage of the Waste Hierarchy each of the treatment methods identified relates to			
	2.5 Explain four environmental impacts of diverting waste or resources away from Landfill			
3. Know what is meant by the term Environmental Risk Assessment	3.1 Describe what is meant by the term 'Environmental Risk Assessment'			
	3.2 Describe the three components of the 'Pollutant Linkage'			
4. Understand the potential environmental and amenity impacts of Waste and Resources Management	4.1 Identify four potential or actual environmental and amenity impacts within a specified type of permitted Wastes and Resource facility			
	4.2 Explain how the four impacts identified may affect the environment			
	4.3 Give two examples of how each identified impact can be managed to prevent or reduce the negative impact on the environment			
	4.4 Identify a piece of processing plant or equipment that you are familiar with and describe three environmental risks which may occur as a result of this breaking down			
	4.5 Describe an action that you would take for each of the risks identified to prevent or reduce the impact on the environment			
5. Understand the systems required to	5.1 Identify at least two rules within a specific Environmental Permit that refer to managing emissions to air, water and land			

protect the environment and ensure compliance with an Environmental Permit	5.2 Describe the systems you would need to have in place to ensure that you manage these emissions in accordance with the identified permit rules			
	5.3 Describe the purpose of a written management system			
	5.4 Give one example of a possible environmental incident that could be included in a written management system			
	5.5 Explain two proactive and two reactive measures that you would have in place for the identified possible environmental incident			

WRM2: Communication, interaction and influence of Stakeholders and other non-legislative factors within Waste and Resources Management

Level: 4		Evidence Type	Results	Comments
Credit Value:3				
Learning Outcome	Assessment Criteria			
1. Understand key stakeholders within the waste and resources management sector	1.1 Identify two internal and three external Stakeholders			
	1.2 Using the stakeholders identified, describe how they can have an impact on the way a specified permitted facility is operated			
	1.3 Describe two ways in which communication and consultation can benefit the site's relationship with the local community			
	1.4 Describe two ways in which effective communication can improve relations within the workplace			
	1.5 Demonstrate three different examples of methods of communication you could use with any of the stakeholders identified			
2. Understand the roles of the Regulators working with the Wastes and Resources Management	2.1 Identify three regulators who enforce regulations relevant to operating a Waste and Resources Management facility			
	2.2 Explain the roles of each of the identified regulators			
	2.3 Explain for each regulator their powers of entry			
	2.4 Explain one enforcement option for each regulator when regulating a waste facility			
3. Understand how non-legislative factors affect changes in Wastes and Resource Management practice	3.1 Identify three non-legislative factors which may affect changes in Waste and Resources Management			
	3.2 Evaluate how these factors may influence how waste and resources are managed in the future			
4. Understand operator responsibilities for data collection, reporting, storage	4.1 List five types of data that is collected as specified within a permit			
	4.2 State the storage periods for each type of data identified in line with current guidance			
	4.3 Explain the methods of storing this data			
	4.4 Identify who to report this data to and the methods available for this			

and retention in relation to a waste and resources management facility	reporting			
	4.5 Explain three factors that could impact adversely on either the collection, the reporting or the storage of environmental data			
	4.6 Explain three consequences of not collecting, reporting or storing the data in line with current guidance			

WRM3: Legislation to support the Operation of a Waste and Resources Management Facility

Level: 4		Evidence Type	Results	Comments
Credit Value: 4				
Learning Outcome	Assessment Criteria			
1. Understand the regulatory framework and policies relevant to waste and resource management facilities	1.1 Distinguish between European Directives and European Regulations			
	1.2 Distinguish between UK Acts of Parliament, Regulations and Codes of Practice			
	1.3 Describe two EU Directives which directly affect your waste management operation			
	1.4 Describe one UK Act of Parliament or UK regulation that derives from each of the identified Directives			
	1.5 Explain the difference between civil and criminal liability in relation to operating a waste and resources management facility			
	1.6 Describe the maximum penalties in each type of court for Environmental offences			
2. Understand the requirements of planning and permitting legislation as applied to the Waste and Resource management industry	2.1 Identify the current planning legislation in relation to Waste and Resources Management facilities			
	2.2 Identify one current planning guidance document in relation to Waste and Resources management facilities			
	2.3 Explain three key documents that are required as part of a new planning application for a waste and resources management facility			
	2.4 Describe two ways in which the planning system can influence the development of waste treatment technologies			
	2.5 Explain two key documents that are required as part of a variation for an existing planning permission for a waste and resources management facility			
	2.6 Distinguish between the following: <ul style="list-style-type: none"> • Waste Exemptions • Standard Rules Permits • Bespoke Permits 			
	2.7 Describe three documents or pieces of information that would be required in order to apply for an Environmental Permit			

	2.8 Describe the three components of the Fit and Proper Person requirements			
	2.9 Explain three types of permit variation			
	2.10 Explain the mechanism and three documents or pieces of information that would be required in order to transfer an Environmental Permit			
	2.11 Explain the mechanism and three documents or pieces of information that would be required in order to surrender an Environmental Permit			
	2.12 Describe two implications of making false statements and not submitting records as required by an Environmental Permit			
	2.13 Describe under what circumstance liquids may be discharged to surface water under a standard rules permit			
	2.14 Describe the two authorisations you could obtain and the relevant issuing authorities in order to discharge contaminated liquids from your site			
	2.15 Identify the current legislation that addresses the collection, treatment, storage and disposal of catering and food waste			
	2.16 Explain two factors that the identified legislation addresses			
	2.17 Identify three guidance documents that may assist you in operating your facility			
	2.18 Describe how the identified guidance documents may assist you in operating your facility			
3. Understand the concept of 'Producer Responsibility'; the requirements of Duty of Care and the legislation relating to hazardous wastes	3.1 Explain the concept of Producer Responsibility			
	3.2 Identify three sectors that are obligated under Producer Responsibility legislation			
	3.3 Describe two requirements of the current Producer Responsibility legislation			
	3.4 Identify the legislation that imposes "duty of care" responsibilities for waste and resources management			
	3.5 Describe the four legal requirements of Duty of Care applicable to waste and resources management			

	3.6 Identify three parties who have responsibilities under Duty of Care			
	3.7 Identify the current legislation that refers to carriers of controlled waste			
	3.8 Distinguish between the tiers of waste carriers, brokers and dealers			
	3.9 Describe the sequence of steps taken to establish an EWC code			
	3.10 Distinguish two differences between absolute and mirror entries in the EWC list			
	3.11 Correctly complete the EA Waste Transfer note for a waste stream that is removed from your waste facility			
	3.12 Explain two reasons why it is important to describe accurately your waste on a waste transfer note			
	3.13 Identify one piece of legislation and one guidance document that applies to Hazardous Waste			
	3.14 Explain how Hazardous Waste is defined			
	3.15 Correctly complete an EA Controlled Hazardous Waste Consignment Note for a hazardous waste stream with which you are familiar			
	3.16 Describe the five sections of the consignment note including how and by whom they are completed			
	3.17 Explain the authorisations that may be required for the carriage of hazardous waste			
4. Understand the definition and classification of Waste and the use of Waste acceptance procedures in the Waste and Resources industry	4.1 Explain the definition of waste with reference to current legislation and guidance			
	4.2 Describe two principles of quality protocols			
	4.3 Identify two examples of quality waste protocols			
	4.4 Identify the legislation that refers to the requirement to have an Environmental Permit			
	4.5 Identify the current legislation that classifies waste			
	4.6 Describe three of these identified waste classifications giving two examples for each class			
	4.7 Identify the current legislation which details the three steps of the Landfill Waste Acceptance Procedures			
	4.8 Describe the requirements within the three steps of the Landfill Waste			

	Acceptance Procedures			
5. Understand the Health and Safety legislation within the Waste and Resource Management industry	5.1 Identify the current primary legislation for the safe operation of your facility			
	5.2 Explain the sections of the current primary legislation for the safe operation of your facility that relate to: Employers Employees Others			
	5.3 Identify the legislation that introduced Risk Assessments			
	5.4 Describe two of the actions that you must take as part of the Risk Assessment process			
	5.5 Identify the legislation that refers to the safe use of work equipment			
	5.6 Describe three requirements of this identified legislation			
	5.7 Identify the legislation that controls the use of equipment for lifting devices			

WRM4: Health and Safety Principles and Practices in the Waste and Resource Management Sector

Level: 4		Evidence Type	Results	Comments
Credit Value: 3				
Learning Outcome	Assessment Criteria			
1. Understand the principles of Health and Safety within the Waste and Resource Management industry	1.1 Explain four health and safety responsibilities of Employers in the workplace			
	1.2 Explain four health and safety responsibilities of Employees in the workplace			
	1.3 Illustrate the difference between the terms 'hazard' and 'risk', using an example from the Waste and Resources Management Industry			
	1.4 Identify the five steps to risk assessment as detailed in the current HSE guidance			
	1.5 Explain how to complete a risk assessment in a Waste and Resources Management facility using the identified five steps to risk assessment			
	1.6 Explain the principle behind the hierarchy of 'control measures' as set out in current HSE guidance			
	1.7 List and provide an explanation for each stage in the hierarchy using examples from a Waste and Resources Management facility			
	1.8 List two hazards in a Waste and Resources Management facility			
	1.9 Identify two hazardous events for each of the hazards identified			
	1.10 Describe two factors that could increase the risk of harm for each hazardous event identified			
	1.11 Explain two control measures for each hazard identified and how these would mitigate the risk of harm			
2. Understand the principles of accident investigation and reporting in the Waste and Resource Management industry	2.1 List the principles of an accident or incident investigation in line with current HSE guidance			
	2.2 Describe how to use the identified principles to carry out an accident or incident investigation in a waste and resources management facility			
	2.3 Identify two examples of unsafe working practices in a waste and resources management facility			
	2.4 Identify one best practice guidance document for controlling each of the identified unsafe working practices			

	2.5 Explain three controls from each of the identified guidance documents			
3. Understand the practises for controlling the safety of contractors and other site users	3.1 Explain four steps you should undertake for the appointment of contractors on a waste and resources management facility, as set out in Health and Safety regulator guidance			
	3.2 Explain the topics you would include in a site induction for a site visitor to a waste and resource management facility			
4. Understand safe working practices to control the use of vehicles plant and equipment on site	4.1 Explain for two named items of plant or processing equipment, how each of the following areas contributes to safe working at a waste and resources management facility: <ul style="list-style-type: none"> • Maintenance • Operative training • Operating procedures 			
	4.2 Explain the purpose of a traffic management plan in relation to the safe operation of a waste and resources management facility			
	4.4 Summarise in line with current Health and Safety regulator guidance, at least five points that should be included within a traffic management plan			
5. Understand the requirement for Fire Risk Assessments and Permits to Work in a Waste and Resources Management facility	5.1 List three key areas that should be included within a Fire risk assessment			
	5.2 Explain how the three key areas identified should be implemented in a waste and resources facility			
	5.3 List three examples of when you might need to issue a Permit to Work			
	5.4 Differentiate with three examples the differences between the Permit to Work system and a normal risk assessment			

WRM5: Principles of Sustainable Waste and Resource Management

Level: 4	Evidence	Results	Comments
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Credit Value: 3		Type		
Learning Outcome	Assessment Criteria			
1. Know the principles of the physical treatment methods available in England and Wales	1.1 Identify four physical treatment methods for waste and resources			
	1.2 Determine one waste and resource type that could be treated by each of the methods identified			
	1.3 Describe two of the treatment methods identified			
	1.4 List one output and one residue from each of the two treatment methods identified			
2. Know the principles of the biological treatment methods in England and Wales	2.1 Identify three biological treatment methods for waste and resources			
	2.2 Determine one waste and resource type that could be treated by each of these methods identified			
	2.3 Describe the three identified treatment methods			
	2.4 List one output and one residue from each of the three treatment methods identified			
3. Know the Thermal and Chemical treatment methods for Wastes and Resources in England and Wales	3.1 Identify two Thermal treatment methods for Waste and Resources			
	3.2 Identify two Chemical treatment methods for Waste and Resources			
4. Understand the principles and procedures of waste and resource transfer facilities	4.1 Explain two reasons for using a waste transfer facility			
	4.2 Identify three ways in which waste can be delivered to a waste transfer facility			
	4.3 Describe why one of the delivery systems identified would be appropriate for a named waste stream			
	4.4 Describe three potential environmental and amenity impacts from a waste or resource transfer activity			
	4.5 Explain how the potential environmental and amenity impacts identified can be controlled or managed			
5. Understand the factors and barriers	5.1 Identify three factors or barriers that may limit the uptake of named treatment methods			

that may limit the uptake of different waste and resource treatment methods	5.2 Explain how the factors or barriers identified may limit the uptake of the treatment methods identified			
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Optional Units

WRM6a: Principles and Practices of Managing a Physical Treatment Processing Facility for Waste and Resources

Level: 4		Evidence Type	Results	Comments
Credit Value: 3				
Learning Outcome	Assessment Criteria			
1. Understand how waste is received or rejected at a physical waste and resources treatment facility	1.1 Describe the procedures for waste reception at a physical waste and resources treatment facility			
	1.2 List three records that you keep relating to waste reception at a physical waste and resources treatment facility			
	1.3 Explain the procedures for rejection of waste from a physical waste treatment facility			
2. Understand the principles behind the physical treatment methods at a waste and resources treatment facility	2.1 Describe three physical treatment methods and the principles upon which they are based			
	2.2 Identify two wastes types that can be treated by each of the identified physical treatment methods			
	2.3 Describe how the two identified waste types can impact on the treatment methods identified			
	2.4 Explain one limitation for each of the physical treatment methods identified			
3. Understand the technical benefits, environmental benefits and problems associated with physical waste and resources treatment methods	3.1 Explain two technical benefits of physical treatment methods			
	3.2 Explain one environmental benefit of a physical treatment method			
	3.3 Describe three problems associated with identified physical treatment method			
	3.4 Explain how the identified problems can be controlled and managed			
4. Understand what emissions, products and residual waste are associated with physical treatment methods and how	4.1 List three emissions from identified physical treatment methods			
	4.2 List two products from identified physical treatment methods			
	4.3 Explain how the emissions identified can be controlled and managed			
	4.4 Describe one end use of the two products identified from physical treatment methods			

these can be managed	4.5 Explain how residual waste from physical treatment methods can be controlled and managed			
	4.6 Explain three reasons why it is important to ensure compliance with an Environmental Permit for a physical waste and resources treatment facility			

WRM6b: Principles and Practices of Managing Biological Treatment Processes for Waste and Resources

Level: 4		Evidence Type	Results	Comments
Credit Value: 3				
Learning Outcome	Assessment Criteria			
1. Understand how waste is received or rejected at a biological treatment facility	1.1 Describe the procedures for waste reception at a biological waste treatment facility			
	1.2 List three records that you keep relating to waste reception			
	1.3 Explain the procedures for rejection of waste from a biological waste treatment facility			
2. Understand the principles behind Open Windrow Composting as a biological waste treatment process	2.1 Describe the Open Windrow composting treatment method and the principles upon which it is based			
	2.2 Identify the Quality Protocol associated with Open Windrow Composting			
	2.3 Identify two wastes types that can be treated by Open Windrow Composting			
	2.4 Describe how one of the waste types identified can impact on Open Windrow composting			
	2.5 Identify one waste type that should not be treated by Open Windrow Composting			
	2.6 Explain why the waste type identified should not be treated by Open Windrow Composting			
	2.7 Explain three limitations of Open Windrow composting			
3. Understand the principles behind In Vessel Composting as a biological waste treatment process	3.1 Describe the In Vessel Composting treatment method and the principles upon which it is based			
	3.2 Identify the Quality Protocol associated with In Vessel Composting			
	3.3 Identify two wastes types that can be treated by In Vessel composting			
	3.4 Describe how one of the identified waste types can impact on In Vessel composting			

	3.5 Explain three limitations of In Vessel Composting			
4. Understand the principles behind Anaerobic Digestion as a biological waste treatment process	4.1 Describe the Anaerobic Digestion treatment method and the principles upon which it is based			
	4.2 Identify the Quality Protocol associated with Anaerobic Digestion			
	4.3 Identify two wastes types that can be treated by Anaerobic Digestion			
	4.4 Describe how one of these waste types identified can impact on Anaerobic Digestion			
	4.5 Explain three limitations of Anaerobic Digestion			
5. Understand the technical and environmental benefits and problems associated with biological treatment processes	5.1 Explain two benefits of implementing the biological treatment Quality Protocols			
	5.2 Explain one technical and one environmental benefit of a named biological treatment process			
	5.3 Describe one potential problem associated with each of the biological treatment processes			
	5.4 Explain how the problems identified can be controlled and managed			
6. Understand what emissions, products and residual waste are associated with biological treatment processes and how these can be controlled and managed	6.1 List two emissions from each of the biological treatment processes			
	6.2 Explain how each of the identified emissions can be controlled and managed			
	6.3 List one product from each biological treatment process			
	6.4 Describe one end use of the products identified			
	6.5 Identify one residual waste from each of the biological treatment processes			
	6.6 Explain how the residual waste identified can be controlled and managed			

	6.7 Explain three reasons why it is important to ensure compliance with an Environmental Permit for a biological treatment facility			
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WRM6c: Principles and Practices of Managing Thermal Processing for Waste and Resources

Level: 4		Evidence Type	Results	Comments
Credit Value: 3				
Learning Outcome	Assessment Criteria			
1. Understand how waste is received or rejected at a thermal waste and resources treatment facility	1.1 Describe the procedures for waste reception at a thermal waste treatment facility			
	1.2 List three records that you keep of waste reception at a thermal waste treatment facility			
	1.3 Explain the procedures for rejection of waste from a thermal waste treatment facility			
2. Understand the principles behind the thermal treatment methods at a waste and resources treatment facility	2.1 Describe three thermal treatment methods and the principles upon which they are based			
	2.2 Identify two wastes types that can be treated by each of the three identified thermal treatment methods			
	2.3 Describe how the two identified waste types can impact on the treatment methods identified			
	2.4 Explain one limitation for each treatment method identified			
3. Understand the technical and environmental benefits and problems associated with thermal waste and resources treatment methods	3.1 Explain two technical benefits of thermal treatment methods			
	3.2 Explain one environmental benefit of a thermal treatment method			
	3.3 Describe three problems associated with identified thermal treatment methods			
	3.4 Explain how the identified problems can be controlled and managed			
4. Understand what emissions, products and residual wastes are associated with thermal treatment methods and how these can be managed	4.1 List three emissions from identified thermal treatment methods			
	4.2 List two products from identified thermal treatment methods			
	4.3 Explain how the emissions identified can be controlled and managed			
	4.4 Describe one end use of the products identified			
	4.5 Explain how residual waste from thermal treatment methods can be controlled and managed			

	4.6 Explain three reasons why it is important to ensure compliance with an Environmental Permit for a thermal waste and resources treatment facility			
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WRM6d: Principles and Practices of Managing Land Remediation Activities

Level: 4		Evidence Type	Results	Comments
Credit Value: 3				
Learning Outcome	Assessment Criteria			
1. Understand the circumstances for which land remediation activities take place	1.1 Explain three reasons why land may need to be remediated			
	1.2 Explain the role of: the desk study the site investigation the conceptual model			
	1.3 Give three examples of methods to investigate contaminated land			
	1.4 Explain one purpose of the role of risk assessment			
	1.5 Identify three pieces of legislation relating to land contamination in England and Wales			
	1.6 Explain two of the identified pieces of legislation in relation to managing a land remediation activity			
	1.7 Identify three sources of information and guidance relating to land remediation practices			
2. Understand the definition of waste relating to land remediation activities	2.1 Explain the legal definition of waste in relation to remediation of land activities			
	2.2 Describe two circumstances in which soils may be considered to be non-waste, or have ceased to be waste after treatment			
3. Understand the principles employed in the selection and use of different techniques for remediation of land affected by contamination	3.1 Explain the role of: the Options Appraisal the Remediation Strategy the Implementation Plan the Verification Plan the Monitoring and Maintenance Plan			
	3.2 Describe two elements from a Verification, Monitoring and Maintenance Plan			
	3.3 Explain the definitions of in-situ and ex-situ remediation			
	3.4 Give one example of an in-situ remediation technique that may be employed under an Environmental Permit			

	3.5 Give two examples of ex-situ remediation techniques that may be employed under an Environmental Permit			
	3.6 Identify three sources of further information and guidance regarding remediation techniques			
	3.7 Explain the remediation strategy for a specific site, to include two examples of remediation techniques and one reason for choosing each remediation techniques			
4. Understand the potential environmental and amenity impacts from land remediation activities	4.1 Describe two potential environmental impacts of one in-situ and two ex-situ remediation techniques			
	4.2 Describe two mitigation and control measures for each example identified			
5. Understand the role of Environmental Permit Conditions in forming the framework for site activities	5.1 Identify four conditions relating to environmental risks within the Standard Rules permit for remediation of contaminated land			
	5.2 Explain four points of interaction between the Environmental Permit and the Deployment Form			

WRM6e: Principles and Practices of Managing an Inert landfill

Level: 4		Evidence Type	Results	Comments
Credit Value: 3				
Learning Outcome	Assessment Criteria			
1. Understand the principles of Environmental permitting for the design, construction and operation of inert landfills	1.1 List three main points that should be followed when undertaking a site investigation for the development of an inert waste landfill site			
	1.2 Describe the importance of two of the identified points that should be followed when undertaking a site investigation for the development of an inert waste landfill site			
	1.3 Identify five additional requirements within an Environmental Risk Assessment that need to be considered over and above those that are already included in the EA's generic risk assessment for the use and disposal of inert waste to land			
	1.4 Describe the additional requirements that would need to be in your Environmental Risk Assessment for the use and disposal of inert waste to land			
	1.5 Describe the principles to be assessed in a typical Hydrogeological Risk Assessment for an inert waste landfill site			
	1.6 Describe at least two factors that should be included within a Hydrogeological Risk Assessment			
	1.7 Describe two engineering requirements for the development of a geological barrier at an Inert waste Landfill site			
2. Understand the definition and types of inert waste	2.1 Define inert waste in accordance with current legislation			
	2.2 List three types of waste that meet the criteria for inert waste			
3. Understand waste treatment and testing requirements	3.1 Describe the pre-acceptance requirements for an inert waste landfill site			
	3.2 Distinguish between the testing regime for inert wastes which are: <ul style="list-style-type: none"> regularly generated by the same process not regularly generated 			
4. Understand the potential	4.1 Describe the processes occurring within an inert waste landfill which could have potential environmental and amenity impacts			

environmental and amenity impacts from inert landfill and how they can be prevented or minimised	4.2 List three potential emissions from an inert waste landfill site			
	4.3 Describe the potential pathways and receptors for each of the three identified potential emissions			
	4.4 Describe two methods of controlling and managing the impacts for each of the three identified potential emissions			
	4.5 Explain two actions that you could recommend that should be implemented for monitoring the environmental and amenity impacts from an inert landfill site			
5. Understand site closure, aftercare and permit surrender requirements	5.1 List three components of a closure and aftercare management plan for an inert landfill site			
	5.2 Describe how the three identified components of a closure and aftercare management plan may be implemented for an inert waste landfill site to ensure compliance			
	5.3 Describe at least two conditions or actions that would need to be satisfied to enable permit surrender for an inert waste landfill site			

WRM6f: Principles and Practices of Managing a Mechanical Biological Treatment Facility

Level: 4		Evidence Type	Results	Comments
Credit Value: 3				
Learning Outcome	Assessment Criteria			
1. Understand how waste is received or rejected at a Mechanical Biological treatment facility	1.1 Describe the procedures for waste reception at a Mechanical Biological waste treatment facility			
	1.2 List three records that you keep of waste reception			
	1.3 Explain the procedures for rejection of waste from a Mechanical Biological waste treatment facility			
2. Understand the principles behind the Mechanical Biological treatment process	2.1 Describe the Mechanical Biological treatment methods and the principles upon which they are based			
	2.2 Identify two wastes types that can be treated by the Mechanical Biological treatment process			
	2.3 Describe how the waste types identified can impact on the treatment process			
	2.4 Explain three limitations of the Mechanical Biological treatment process			
3. Understand the technical and environmental benefits and problems associated with Mechanical Biological treatment processes	3.1 Explain two technical benefits of Mechanical Biological Treatment			
	3.2 Explain one environmental benefit of Mechanical Biological Treatment			
	3.3 Describe three potential problems associated with a Mechanical Biological treatment process			
	3.4 Explain how the problems identified can be controlled and managed			
4. Understand what emissions, products and residual waste are associated with Mechanical Biological treatment processes	4.1 List three key emissions from Mechanical Biological treatment			
	4.2 Explain using two examples how the key emissions identified can be controlled and managed			
	4.3 List two products from the Mechanical Biological treatment processes			
	4.4 Describe one end use of the products identified			

and how these can be managed	4.5 Explain how residual waste from Mechanical Biological treatment can be controlled and managed			
	4.6 Explain three reasons why it is important to ensure compliance with an Environmental Permit for a Mechanical Biological Treatment facility			

Appendix 1: Qualification Structure

Learners must complete all units in the Mandatory Unit group and one unit from the Optional Unit group to achieve a total of 19 credits.

Mandatory Units

Ofqual Code	Unit Title	Credit Value	Credit Level	WAMITAB Code
M/505/9077	Environmental Protection in Waste and Resource Management	3	4	WRM1
T/505/9078	Communication, interaction and influence of Stakeholders and other non-legislative factors within Waste and Resources Management	3	4	WRM2
A/505/9079	Legislation to support the Operation of a Waste and Resources Management Facility	4	4	WRM3
M/505/9080	Health and Safety Principles and Practices in the Waste and Resource Management Sector	3	4	WRM4
T/505/9081	Principles of Sustainable Waste and Resource Management	3	4	WRM5

Optional Units

Ofqual Code	Unit Title	Credit Value	Credit Level	WAMITAB Code
Y/505/9087	Principles and Practices of Managing a Physical Treatment Processing Facility for Waste and Resources	3	4	WRM6a
R/505/9086	Principles and Practices of Managing Biological Treatment Processes for Waste and Resources	3	4	WRM6b
J/505/9084	Principles and Practices of Managing Thermal Processing for Waste and Resources	3	4	WRM6c
F/505/9083	Principles and Practices of Managing Land Remediation Activities	3	4	WRM6d
A/505/9082	Principles and Practices of Managing an Inert landfill	3	4	WRM6e
H/505/9089	Principles and Practices of Managing a Mechanical Biological Treatment Facility	3	4	WRM6f



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Qualification Code: 601/2388/6

*WAMITAB Code: 4WRM6a, 4WRM6b, 4WRM6c,
4WRM6d, 4WRM6e, 4WRM6f*

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