CIWM | Qualifications

Version 3, August 2023

Qualification Code: 603/3581/6
CIWM Code: VRQ4
Maximum Guided Learning Hours: 30
Total Qualification Time: 216

Part of the CIWM/WAMITAB Operator Competence Scheme

CIWM (WAMITAB) Level 4 Certificate in Waste and Resource Management

VRQ406 (Physical Treatment)
VRQ407 (Biological Treatment)
VRQ408 (Thermal Processing)
VRQ409 (Land Remediation)
VRQ410 (Inert Landfill)
VRQ411 (Mechanical Biological Treatment)
VRQ412 (End of Life Vehicle Facilities)
VRQ413 (Metal Recycling Facilities)
VRQ414 (Storage of Hazardous Waste)
VRQ415 (Land Spreading)

Together, we stand for
a world beyond waste

About CIWM and this Handbook

About CIWM

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

As the leading professional body for resource and waste professionals, CIWM (Chartered Institution of Wastes Management) is the voice of the sector and represents over 5,500 individuals in the UK and overseas.

CIWM has a unique understanding of the sector. Our professional knowledge and trusted reputation enables us to inform and influence legislation and policy, playing a vital part in shaping the future role and reputation of the sector.

Equal Opportunities

CIWM 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 CIWM Qualification Handbook. This will help you to complete your qualification. It contains:

- 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.

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Candidate Information

Name

CIWM Learner Number

Registration Date

Enrolment Date

Centre Name

Centre Address

Centre Contact

Tutor Name

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Frequently Asked Questions

What is a regulated qualification?

A regulated qualification demonstrates that you have the knowledge, skills and/or understanding to meet the standards expected by employers in your industry. Your qualification is recognised by CIWM and one or more of the educational regulators across the UK.

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 on site. 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

What are the entry requirements of this qualification?

This qualification is open entry. This means that learners interested in undertaking this qualification do not require any other qualifications or levels of attainment in order to take 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 6 units to achieve the qualification. This should be made up of the 5 units from the Mandatory Group and 1 unit from the Optional Group:

Mandatory Group

- VRQ401 – Health and safety in the waste and resource management industry.
- VRQ402 – Environmental protection in the waste and resource management industry.
- VRQ403 – Principles of sustainable waste and resource management.
- VRQ404 – Legislation for the operation of a waste management facility.
- VRQ405 – Stakeholder communication and other non-legislative factors affecting the waste and resource management industry.

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Optional Group

- VRQ406 – Principles and practices of managing a physical treatment processing facility.
- VRQ407 – Principles and practices of managing a biological treatment processing facility.
- VRQ408 – Principles and practices of managing a thermal treatment processing facility.
- VRQ409 – Principles and practices of managing land remediation activities.
- VRQ410 – Principles and practices of managing an inert landfill.
- VRQ411 – Principles and practices of managing a mechanical biological treatment facility.
- VRQ412 – Principles and practices of managing an end of life vehicle facility.
- VRQ413 – Principles and practices of managing a metals recycling facility.
- VRQ414 – Principles and practices of managing a hazardous waste storage facility
- VRQ415 – Principles and practices of managing land spreading activities

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.

What is a CIWM (WAMITAB) Qualifications Centre?

You will gain your qualification through a CIWM (WAMITAB) Qualifications 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 CIWM.
- Provide a registration number.
- Apply for your certificate when you have completed your qualification or units.

How long will it take?

You will have one year to complete your qualification from the date of registration. Your CIWM (WAMITAB) Qualifications Centre or Environmental Regulator may also have some requirements that they will explain to you.

Who will help me achieve my 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.

Assessor
The assessor will be responsible for marking your submissions.

Internal Quality Assurer (IQA)
The IQA maintains the quality of assessment within the centre by internally moderating the assessment standards and accuracy of the assessor's marking.

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External Quality Assurer (EQA)
An EQA is employed by CIWM to ensure that your centre meets the required national standards for quality and assessment.

What are my responsibilities as a learner?

You will need to:
- Provide your centre with your personal details so they can register you with CIWM.
- Comply with health and safety law and regulations.

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

1. **Planning:** Your assessor will tell you about the mandatory units of the qualification and will help you to select relevant optional units.

2. **Evidence:** You will gather evidence for your portfolio (see next question for types of evidence).

3. **Feedback:** Your assessor will provide regular feedback on your progress and will arrange for additional training if needed. When your assessor confirms you are competent after an assessment, it will be recorded in your handbook.

4. **Achievement:** Once you have completed all the units and gathered all the evidence you need, your centre will apply for your CIWM certificate.

What are the evidence requirements for this qualification?

The primary sources of evidence for this qualification are:

Question and Answer (Q/A): candidate statements, written questions, in-depth question papers and/or written assignments.

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

- Your assessor
- Your qualification workbook
- CIWM

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Useful Words

Instructional verbs	Definition
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.
Awarding Organisation	To have a qualification recognised in the UK it must be accredited through an awarding body. These organisations are regulated by Ofqual in England, Qualifications Wales, CCEA in Northern Ireland and SQA in Scotland to ensure that you receive a high quality, recognised qualification upon completion of the course.
CIWM	An Awarding Organisation for a wide range of qualifications in waste management and recycling, cleaning and street cleansing, facilities management, and parking. CIWM 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.
CIWM (WAMITAB) Qualifications Centre	These 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.
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.
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.
Multiple Choice Tests	A form of assessment where learners are asked to select the best possible answer from the list provided.
Tutor	A person employed to instruct an individual or small group on a particular topic. Tutors that deliver knowledge and understanding qualifications and units should have relevant competence and experience in the subject that they are delivering and have experience of delivering vocational learning.
Units – Mandatory and Optional	Units form the building blocks of all qualifications that are nationally regulated on the Qualification Credit Framework. 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.

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Unit Terms

Instructional verbs	Definition
Adapt	To change something to make suitable for new purpose.
Advise	To inform someone about a fact or situation formally or officially.
Analyse	To look at something (e.g. a process) and use given classifications or principles to gain a further understanding.
Apply	To put something into action. A "doing" task which requires "real" evidence from a workplace scenario.
Assess	To offer a reasoned judgement of the standard, quality of situation or ability informed by relevant facts.
Brief	To instruct or inform someone thoroughly to prepare them.
Carry out	To undertake an activity of a practical nature.
Check	To verify or establish. To examine something in order to confirm its accuracy, quality or condition.
Collect	To bring or gather together.
Communicate	To share or exchange information, news or ideas by speech, writing etc
Compare	To look at the characteristics of an item or activity and note the similarities and differences.
Complete	To finish.
Comply	To act in accordance with specified standards or requirements.
Conduct	To do or carry out.
Confirm	To check if something is true, correct, completed or in place.
Consult	To seek information or advice from an expert or professional. To have discussions with someone before undertaking a course of action.
Critically Compare	To 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.
Define	Provide a generally recognised or accepted definition.
Demonstrate	To clearly show e.g. by practical exhibition (in real time) and/or historic evidence. These would normally be accompanied by an explanation.
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 e.g. what is relevant. To find a solution by following a set of procedures. To calculate a numeric value.
Develop	Build a process or activity or understanding either from scratch or using an existing product to create something workable.
Differentiate/ Distinguish	To look at the characteristics of an item or situation/activity and explain the differences.

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Discuss	To give an account that addresses a range of ideas and arguments.
Ensure	To make certain that something will occur or is the case.
Establish	To set up.
Evaluate/ Justify	To 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.
Examine	To look at, inspect or scrutinise carefully.
Explain	To provide a comprehensive answer that shows an understanding of the content/process mentioned. The 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.
Follow	To be guided by instructions.
Give	To supply/provide without explanation.
Identify	This requires the learner to list and briefly 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 Level 4, 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	To put 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.
Inform	To give someone facts or information.
Keep	To have or retain possession of something.
List	To produce a number of relevant items which apply to the question. Further description is not required.
Maintain	To enable something to continue. To keep something in good condition.
Make	To create, produce or form something.
Manage	After a development process ensure that the product/process works using relevant management techniques.
Minimise	To reduce something to the smallest possible amount or degree.
Monitor	To check if a process or activity is carried out correctly.
Notify	To inform someone of something in a formal or official manner.
Obtain	Acquire.
Organise	To arrange systematically. To coordinate activities. To make arrangements or preparations.
Outline	A description setting out main characteristics or points.
Plan	To consider, set out and communicate what needs to be done.
Prepare	To make ready for use or consideration. To create in advance.
Process	A systematic series of actions.
Produce	To create, manufacture or make something.
Promote	To support or actively encourage. To further progress.
Propose	To put forward an idea, plan or suggestion for consideration.

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Provide	To make available or supply.
Recognise	To be aware of, familiar with and able to identify an activity or product.
Recommend	To suggest or put something forward as being suitable for a particular purpose or role with reasons why.
Rectify	To correct or put right.
Refer	To pass the matter to the responsible person for a decision.
Reflect	To look back upon and appraise.
Report	To prepare a detailed account or statement about an event or topic.
Request	To formally ask for something.
Research	To investigate/study to establish facts and reach a conclusion.
Resolve	To settle or find a solution to a problem.
Respond	To react quickly or positively to something.
Review	To formally assess something with the intension of instituting change if required.
Secure	To obtain something e.g. commitment from colleagues.
Seek	To ask for something from someone.
Select	To carefully choose the most suitable option for a task/purpose.
Set up	To prepare a system or set of equipment for operation.
Specify	To state a fact or requirement clearly and precisely.
State	To express something definitely or clearly in speech or writing.
Suggest	To give possible alternatives, produce or put forward an idea/plan.
Summarise	To give a brief statement in your own words of the main points.
Take action/ measures/ steps	To do something to achieve an aim or deal with a problem.
Train	To teach a person a particular skill or type of behaviour through practice and instruction.
Undertake	To take part in or carry out an activity/task.
Use	To apply information or prior learning. To put into service or action. To employ for a given purpose.

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Plagiarism/Collusion Awareness for Learners

CIWM is committed to ensuring valid and authentic assessments for all learners. As an Awarding Organisation, we are responsible to government regulators to maintain the quality and consistency of the qualifications that we award, and that our network of Approved Centres, deliver.

CIWM, and each of its Centres, have clear, transparent, and robust procedures in place for dealing with plagiarism. This includes preventing, identifying, confirming, and reporting plagiarism, and penalising those who commit such acts of malpractice.

As a learner registered with CIWM, you must be aware of what your responsibilities are when completing assessments. This short notice is designed to provide the information you will need to make the right choices.

Before you submit any evidence/assessments for marking, you will be asked to sign a declaration to state that you have understood and followed these regulations. If there is anything that you do not understand, you must ask your assessor/tutor or another member of staff within your Centre.

The regulations define plagiarism as:

- The failure to properly acknowledge sources and/or,
- The paraphrasing of more than 50% of an assessment item and/or,
- The submission of another person's work as if it were the candidate's/learner's own

Essentially, this means that the work and ideas submitted for assessment must be your own, and that you must not copy from another learner or source or allow another one to copy from you. You must not collude with anyone else to obtain their assistance in completing an assessment.

During your qualification, you will have opportunities to undertake research to support you in answering assessment tasks. This research could be from a wide range of sources, in both printed texts, online and on TV. Using information from published sources in a good way to demonstrate your understanding of a subject area, and to demonstrate your ability to find and assimilate information. However, care must be taken when using materials – you must not copy it and claim it as your own.

For further information, please refer to CIWM's Plagiarism Awareness for Learners

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SECTION 1 –
Mandatory Unit Group

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VRQ401: Health and safety in the waste and resource management industry

Level: 4		
Learning Outcomes		
1. Know the main requirements of health and safety legislation in the waste and resource management industry.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1. Explain the main legal requirements of health and safety legislation on waste and resource management facilities, in relation to: • employers • employees • others	Your answer should: • Give the title and sections of the relevant legislation from which each example is taken. • Explain **four** health and safety responsibilities of employers in the workplace. • Explain **four** health and safety responsibilities of employees in the workplace. • Explain **one** health and safety responsibility of organisations to others in the workplace (including reference to who the term 'others' refers too).	
1.2 Identify how to locate current health and safety information.	Your answer should establish how to locate current health and safety information. Please refer to both internal and external sources, stating the name of the source and website links.	
1.3 Describe the main features and legal requirements for: • fire risk assessments • accident management plans • CoSHH • PUWER	For each of the bullet pointed items, your answer should: • Identify the relevant legislation and describe the main features of this legislation, referring to any sections, regulation numbers or article numbers.	

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• LOLER • DSEAR	• Provide an explanation of the activities and processes that should be completed on site to ensure compliance with these legal requirements.	
Learning Outcomes		
2. Understand the hazards, risks, control measures and monitoring associated with a waste and resource management environment.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1. Explain the difference between a hazard and a risk.	Your answer should explain the difference between a hazard and a risk. You will need to include: • Define a hazard. • Define a risk.	
2.2. Explain how to complete a risk assessment.	Your answer should identify the five steps to risk assessment as detailed in the current Health and Safety Executive guidance. Your answer should include the activities and processes that would be undertaken in each of these five steps to complete a risk assessment.	
2.3. Explain the difference between a formal and dynamic risk assessment.	Your answer should clearly illustrate the difference between a 'formal' and 'dynamic' risk assessment.	
2.4. Explain the hierarchy of 'control measures'.	Your answer should explain the principles behind the hierarchy of 'control measures' as set out in current Health and Safety Executive guidance and provide an explanation for each stage of the hierarchy using waste and resource management examples.	
2.5. Describe the characteristics of hazardous substances and their warning labels.	Your answer should describe the characteristics of **four** hazardous substances. For each, your answer should include:	

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	• A brief description of the substance. • The substance's hazardous properties. • The image of appropriate warning label(s).	
2.6. State the types of personal protective equipment (PPE) required and how they must be used, maintained, and stored.	Your answer should state: • The different types of PPE required on site. • When and how they must be used. • How they must be maintained and stored. You may find it easier to display this information in a table.	
2.7. Describe the main causes of accidents and incidents in the workplace.	Your answer should describe **five** hazards that cause accidents and incidents in the workplace, including the associated risks with **two** examples for each.	
2.8. Explain the control measures used in the workplace to mitigate the risk of harm.	For each of the hazards identified in 2.7, explain **two** control measures for each and how these would mitigate the risk of harm.	
Learning Outcomes		
3. Understand the principles of accident investigation and reporting in the waste and resource management industry		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 List the steps involved in an accident and incident investigation in line with current regulator guidance.	Your answer should list the **four** steps involved in an accident and incident investigation stating the current Health and Safety Executive guidance.	
3.2 Explain how to carry out an accident and incident investigation in line with current regulator guidance.	Your answer should: • Provide an accident / incident scenario. • Explain what you would do when you first arrive at the scene. • Use the list in 3.1 to explain the process that would be undertaken to carry out an accident and incident investigation.	

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Learning Outcomes		
4. Understand the practises for controlling the safety of contractors and other site users.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Explain the steps required to appoint contractors on a waste management facility in line with current regulator guidance.	Your answer should explain the steps you should undertake for the appointment of contractors on a waste management facility stating the current Health and Safety Executive guidance.	
4.2 Describe the topics to be included in a site induction for a visitor to a waste and resource management facility.	Your answer should describe **four** topics you would include in a site induction for a site visitor to a waste and resource management facility.	
Learning Outcomes		
5. Understand safe working practices to control the use of vehicles plant and equipment on site.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 Explain how each of the following areas contributes to safe working at a waste and resource management facility for plant and processing equipment: • Maintenance • Operative training • Operating procedures	Your answer should explain how each of the following contribute to safe working at a waste and resource management facility: • Maintenance • Operative training • Operating procedures You should use **one** named example of an item of plant or processing equipment in your answer.	
5.2 Explain the purpose of a traffic management plan in relation to the safe operation of a waste management facility.	Your answer should explain the purpose of a traffic management plan in relation to the safe operation of a waste management facility.	
5.3 Summarise the key points of a traffic management plan in line with current regulator guidance.	Your answer should summarise a minimum of **five** points that should be included within a traffic management plan stating relevant regulator guidance.	

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Learning Outcomes		
6. Understand the requirement for permits to work in a waste and resource management facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
6.1 List the circumstances that may require the issue of a permit to work.	Your answer should list **three** examples of when you may need to issue a permit to work.	
6.2 Differentiate between the permit to work system and a normal risk assessment.	Highlight **three** differences between the permit to work system and a risk assessment.	

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VRQ402: Environmental protection in the waste and resource management industry

Level: 4		
Learning Outcome		
1. Understand the systems required to protect the environment and ensure compliance with an environmental permit.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Identify the rules within an environmental permit that refer to managing emissions to air, water and land.	Your answer should identify a minimum of **two** rules within a specific environmental permit that refer to managing emissions to air, water and land. ***Hint:*** *you could quote the wording from the environmental permit as long as you include the Standard Rules Permit Number where applicable. If you are using a bespoke permit as an example, you could add a screen shot of the rules to your assignment.*	
1.2 Describe the systems for managing emissions to air, water and land in accordance with the identified permit rules.	Your answer should describe the systems you would need to have in place to ensure that you manage emissions in accordance with the identified permit rules.	
1.3 Describe the purpose of a written management system.	Your answer should describe the purpose of a written management system.	
1.4 Describe the content of a written management system according to regulatory guidance.	Your answer should describe the content of a written management system. Your answer must refer to regulatory guidance.	
1.5 Identify the possible environmental incidents that could be included in a written management system.	Your answer should identify **two** examples of possible environmental incidents that could	

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	be included in a written management system.	
1.6 Explain the proactive and reactive measures used to manage the risk posed by possible environmental incidents.	Your answer should explain **two** proactive and **two** reactive measures that you would have in place for **one** of the identified possible environmental incidents referred to in 1.5.	
1.7 Describe the reporting procedure for notifying the regulator of an environmental incident in accordance with the environmental permit.	Your answer should: • Outline the reporting procedure for notifying the regulator of an environmental incident in accordance with the environmental permit. • Refer to the timescales for reporting. • State what records must be kept. ***Hint:*** *you could quote the wording from the environmental permit as long as you include the Standard Rules Permit Number where applicable and describe in your own words how you would do this e.g. the type of information you would provide. If you are using a bespoke permit as an example, you could add a screen shot of the rules to your assignment.*	
Learning Outcome		
2. Understand how to assess the environmental impact of work activities and how this can be minimised.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe what is meant by the term 'environmental risk assessment.'	Provide a definition of environmental risk assessment.	

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2.2 Describe the process of completing an environmental risk assessment in accordance with regulatory guidance.	Your answer should identify and describe the steps involved in an environmental risk assessment. Your answer must refer to regulatory guidance and you may wish to include examples to illustrate your points.	
2.3 Describe the components of the 'pollutant linkage'	Your answer should describe the three components of the 'pollutant linkage.'	
2.4 Explain how to assess the impact of work activities and resource use in the environment.	Your answer should use a specific example to explain how to assess the impact of work activities **AND** the use of resources on the environment. Your answer **must:** • Refer to how you would use risk analysis to determine the scale and potential impact. • Refer to the steps in assessment criteria 2.2	
2.5 List the sources of specialist advice available to manage the environmental impact of work activities and resource use.	Your answer should list **three** sources of specialist advice (e.g. organisations and departments) available to help manage the environmental impact of work activities and resource use. The list should include two external and one internal source.	
Learning Outcome		
3. Understand the legal and organisational requirements for managing the risk of fires on site.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Describe the regulatory requirements for fire prevention on sites that store combustible wastes.	Your answer should describe the purpose and regulatory requirements for fire prevention plans on sites that store combustible wastes.	

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	Hint: *you may want to refer to Standard Rule or Bespoke Permit clauses on fire prevention plans in your answer.*	
3.2 List the key areas that should be included within a fire prevention plan.	Your answer should list the key areas that should be included in a fire prevention plan.	
3.3 Explain the organisational procedures for managing the risk of fires on site.	Your answer should explain **three** procedures an organisation could put in place to manage the risk of fire on a site.	
Learning Outcome		
4. Understand the potential environmental and amenity impacts of waste and resource management		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 List the potential or actual environmental and amenity impacts of waste and resource management.	Your answer should identify a type of waste facility and list **four** potential or actual environmental impacts that may arise from that facility.	
4.2 Explain how the impacts identified may affect the environment.	Your answer should explain how the **four** impacts identified in 4.1 may affect the environment.	
4.3 Describe how environmental and amenity impacts can be managed to prevent or reduce the negative effects to the environment.	Your answer should explain how the **four** impacts identified in 4.1 can be detected and managed to prevent or reduce their negative impact on the environment.	
4.4 Describe the environmental risks posed by the breakdown of processing plant and equipment.	Your answer should: • Identify a piece of processing plant or equipment that you are familiar with. • Describe **three** environmental risks which may occur because of this breaking down.	
4.5 Describe how the environmental risks posed by the breakdown of processing plant and equipment can be managed to prevent	Your answer should describe an action that you would take for each of the risks identified	

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or reduce the negative effects on the environment.	in 4.4 to prevent or reduce the impact on the environment. ***Hint:*** *you are taking action to reduce the impact* ***after*** *the plant or equipment has broken down (reactive). Preventative actions (e.g. an improved maintenance schedule) will not answer the question.*	

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VRQ403: Principles of sustainable waste and resource management

Level: 4		
Learning Outcome		
1. Understand the principles of sustainable waste and resource management.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe what is meant by the term 'sustainable waste management.'	Provide a definition of sustainable waste management and where it is derived from, referring to relevant UK legislative frameworks	
1.2 Summarise the principles of sustainable waste management.	Your answer should summarise **three** principles of sustainable waste management.	
1.3 Describe the factors that could prevent waste being managed in the most sustainable manner.	You should describe **two** factors or issues that could prevent waste being managed in the most sustainable manner.	
Learning Outcome		
2. Understand the waste hierarchy and its application in sustainable waste and resource management.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the principles underpinning the waste hierarchy.	You should describe: • What the waste hierarchy is. • Who it applies too. • The legislation that introduced the waste hierarchy (both UK and EU) into the UK.	
2.2 Explain the stages of the waste hierarchy.	Your answer should provide an explanation of the **five** stages within the waste hierarchy. Provide examples to support your explanation at each stage.	
2.3 Identify physical, chemical, thermal and biological treatment methods.	You should identify a minimum of **one** treatment method under each of the headings; • physical • chemical • thermal • biological	
2.4 State which stage of the waste hierarchy physical,	Your answer should state which stage of the waste hierarchy each of the treatment methods identified	

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chemical, thermal and biological treatment methods relate to.	in 2.3 relate to and give a brief explanation why that treatment method falls under that stage.	
2.5 Describe the environmental impacts of diverting waste and resources away from landfill.	Your answer should describe: • **Three** positive environmental impacts of diverting waste and resources away from landfill. • **One** negative environmental impact of diverting waste and resources away from landfill.	
Learning Outcome		
3. Understand the principles and procedures of waste and resource transfer and treatment facilities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Explain reasons for using a waste transfer and treatment facility.	Your answer should provide **two** reasons to explain why waste producers and waste operators may need to use a waste transfer and treatment facility.	
3.2 List different transport systems that can be used for the delivery of waste from the producer to a waste transfer and treatment facility.	List **three** different transport systems that can be used for the delivery of waste from the producer to a transfer and treatment facility.	
3.3 Explain why different transport delivery systems would be suitable for different waste streams.	Using each of the transport delivery systems identified in 3.2, explain why that transportation system may be used for different types of waste.	

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VRQ404: Legislation for the operation of a waste management facility

Level: 4		
Learning Outcome		
1. Understand the regulatory framework and policies relevant to waste and resource management facilities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Explain the difference between UK Acts of Parliament, regulations and codes of practice	Your answer should explain the difference between Acts of Parliament, Regulations and Codes of Practice including: • Their different status in law • How they are established, including the parties and processes involved	
1.2 Describe UK Acts of Parliament which directly affect waste management operations	Your answer should: • State a type of waste management facility. • Identify **two** Acts of Parliament that are relevant to the operation of this facility. • Provide a short description of the main features and the relevance of these Acts to the operation of this facility. • Be relevant to the operation of a facility in the waste and resource management sector rather than the wider organisation.	
1.3 Describe UK regulations that directly affect waste management operations	Your answer should: • State a type of waste management facility. • Identify **two** UK regulations that are relevant to the operation of this facility. • Provide a short description of the main features and the relevance of these Regulations to the operation of this facility. • Ensure that the regulations you select are relevant to the operation of a facility in the waste and resource management sector rather than the wider organisation.	

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1.4 Explain the difference between civil and criminal liability in relation to operating a waste and resources management facility	Your answer should explain the difference between civil and criminal liability using waste and resource management examples.	
1.5 Explain how criminal penalties are determined using current sentencing guidelines.	Your answer should: • Reference the latest sentencing guidelines by providing the full title of the guidance and including a website link. • Explain how criminal penalties are determined (referring to the twelve steps) using these. • Include reference to the culpability and harm categories within the guidelines.	
Learning Outcome		
2. Understand the requirements of planning legislation as applied to the waste and resource management industry		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 State the current planning legislation in relation to waste and resources management facilities	State the full title of **one** piece of planning legislation related to waste and resources facilities.	
2.2 Identify current planning guidance in relation to waste and resources management facilities	Your answer should identify and briefly describe **one** current planning guidance document relating to waste and resource management.	
2.3 Describe key documents that are required as part of a new planning application or variation of an existing planning permission for a waste and resources management facility	Your answer should identify and describe **three** of the key documents required when making a new planning application or variation of an existing planning permission for a waste and resource management facility.	
2.4 Explain how the planning system can influence the development of waste treatment technologies	Your answer should give **two** examples of ways in which the planning system can impact on/influence the development of specific waste treatment technologies. You may wish to identify case studies to support your answer.	
Learning Outcome		
3. Understand the requirements of permitting legislation as applied to the waste and resource management industry		
Assessment Criteria	**Indicative Content**	**Learner Answer**

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3.1 Describe the following: • Waste Exemptions • Standard Rules Permits • Bespoke Permits	Describe each of the following in turn, including their use, content, and legal requirements: • Waste Exemptions • Standard Rules Permits • Bespoke Permits	
3.2 Describe what information is required when applying for an environmental permit	Your answer should describe **three** documents or pieces of information that would be required to apply for an environmental permit.	
3.3 Describe the components of the 'operator competence' requirements	Your answer should describe **three** different components of the operator competence requirements.	
3.4 Describe the different types of permit variation	Your answer should list **three** different types of permit variation, giving examples of when each one would be used.	
3.5 Explain the mechanism and information required to transfer an environmental permit	Your answer should: • Include an overview of what a transfer of permit means. • Explain the method available to complete the transfer. • Identify and explain **three** pieces of information that would be required as part of the transfer process.	
3.6 Explain the mechanism and information required to surrender an environmental permit	Your answer should: • Include an overview of what a surrender of permit means. • Explain the method available to surrender the permit. • Identify and explain **three** pieces of information that would be required as part of the surrender process.	
3.7 Identify the actions that could be taken by the environmental regulator in response to breaches of an environmental permit.	Your answer should identify **two** actions that could be taken by the environmental regulator in response to breaches of an environmental permit.	

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3.8 Describe the circumstance that would allow liquids to be discharged to surface water under a standard rules permit	Your answer should refer to a standard rules permit and explain the circumstances that allow the discharge of liquids to surface water within this permit.	
3.9 State the options available in order to remove contaminated liquids from a permitted waste facility.	Your answer should state **two** options for removing contaminated liquids from a permitted waste facility.	
Learning Outcome		
4. Understand the legislation and policies relevant to responsibilities within the waste and resource management industry		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Explain the concept of producer responsibility	Your answer should explain what is meant by producer responsibility and why it is in place.	
4.2 Identify sectors that are obligated under producer responsibility legislation	Your answer should list and briefly describe **three** separate sectors that have obligations under Producer Responsibility and the legislation associated with each of these three sectors.	
4.3 Describe the requirements of the producer responsibility legislation	Your answer should describe **two** requirements of producer responsibility legislation.	
4.4 State the legislation that imposes "Duty of Care" responsibilities for waste and resources management activities	State the full title of the legislation and the relevant section.	
4.5 Describe the legal requirements of Duty of Care legislation applicable to waste and resources management	Your answer should describe **five** legal requirements as part of the Duty of Care applicable to waste and resource management.	
4.6 List the parties who have responsibilities under Duty of Care	List **three** parties who have responsibility under Duty of Care.	
4.7 Explain why it is important to carry out checks in accordance with the Duty of Care legislation prior to passing waste on.	Your answer should: • Explain why duty of care checks are important, referring to the legal requirements in 4.5. • Consider the issues associated with failing to complete these checks.	
4.8 State the current legislation that refers to carriers of controlled waste	State the full name of the legislation and the relevant section.	

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4.9 Distinguish between the tiers of waste carriers, brokers and dealers	Your answer should explain the differences between the tiers of waste carriers, brokers and dealers by: • Providing a definition of each. • Providing a brief description of their roles. ***Hint:*** *to distinguish you must look at the characteristics of waste carriers, brokers and dealers, and explain the differences.*	
4.10 State the current regulations that address the collection, treatment, storage and disposal of catering and food waste	State the full title of **one** current, relevant regulation that addresses the collection, treatment, storage and disposal of catering and food waste.	
4.11 Describe the current regulations that address the collection, treatment, storage and disposal of catering and food waste	Your answer should describe the current regulation (identified in 4.10) that addresses the collection, treatment, storage and disposal of catering and food waste.	
4.12 Identify guidance documents that can be used to support the operation of waste and resource management facilities	Your answer should identify **two** guidance documents (providing the website address for each): • One piece of Waste or Environmental Guidance • Once piece of health and safety guidance. ***Please note:*** *All guidance provided should be from a UK regulator and relevant to a waste and resource management facility.*	
4.13 Explain how guidance documents can be used to support the operation of waste and resource management facilities	Your answer should explain how each of the guidance documents identified in 4.12 can assist in the operation of a wastes and resource management facility.	
Learning Outcome		
5. Understand the regulatory framework relevant to waste and resource management facilities		
Assessment Criteria	**Indicative Content**	**Learner Answer**

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5.1 Explain how to establish an European Waste Code (EWC) for wastes	Your answer should set out the sequence of steps taken to establish the correct EWC code for wastes referring to the regulator guidance.	
5.2 Distinguish between absolute and mirror entries in the European Waste Codes (EWC) list	Your answer should: • Provide a definition of absolute entries. • Provide a definition of mirror entries are. • Explain **two** differences between them. ***Hint:*** *to distinguish you must look at the characteristics of absolute and mirror entries and explain the differences.*	
5.3 Complete a waste transfer note for a waste stream that is removed from a permitted waste facility	To answer this, you should complete a waste transfer note using the scenario provided. This could be from your own permitted facility, or an example based on a fictional facility. It must be correctly completed in line with guidance and legislation. ***Please note:*** *you **must** use a waste transfer note template issued by the regulator.*	
5.4 Explain why it is important to accurately describe waste on a waste transfer note	Your answer should include: • **Two** reasons why accurate descriptions of waste on waste transfer notes are important. • The consequences of failing to accurately describe wastes.	
5.5 Identify the regulations and guidance applicable to hazardous waste	Your answer should list and briefly describe: • **One** regulation that can be applied to hazardous waste. • **One** guidance document that can be applied to hazardous waste.	
5.6 State the definition for hazardous waste	State the full, legal definition of hazardous waste. Your answer should reference the full title and section of the legislation.	
5.7 Complete a hazardous waste consignment note for a hazardous	To answer this, you should complete a hazardous waste consignment note using the scenario provided. This could be from your own permitted	

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waste stream that is removed from a permitted waste facility	facility, or an example based on a fictional facility. It must be correctly completed in line with guidance and legislation. ***Please note:*** *you* ***must*** *use a hazardous consignment note template issued by the regulator. Only complete the first page PRODUCER'S/HOLDER'S/CONSIGNOR'S COPY, parts A to E.*	
5.8 Describe the process for completion of a hazardous waste consignment note	Your answer should describe the process in your own words. Your answer should include: • How to complete the five sections of the consignment note. • What information is checked on the note and why. • Who must complete each section. • Who must check each section during the transfer process.	
5.9 Explain why it is important to check the information on a hazardous waste consignment note prior to accepting a waste load.	Your answer should: • Explain why it is important to check the information on a hazardous waste consignment note prior to accepting a waste load. • Consider the consequences associated with failing to carry out these checks.	
5.10 State the authorisations that may be required for the carriage of hazardous waste	State **two** authorisations that may be required, and from whom these are obtained.	
Learning Outcome		
6. Understand the definition and classification of waste and the use of waste acceptance procedures in the waste and resources industry		
Assessment Criteria	**Indicative Content**	**Learner Answer**
6.1 State the legal definition of controlled waste	Your answer should define 'controlled waste' in legal terms. In your definition, you will need to include references to Acts or Regulation.	
6.2 Describe the classifications of controlled waste	Your answer should describe **three** waste classifications, giving **two** examples for each class.	

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6.3 State the legislation which mandates the requirement for an environmental permit	State the full title of **two** relevant Acts or regulations and the appropriate sections which mandate the requirement for an environmental permit.	
6.4 Describe the principles of quality protocols	Your answer should describe **two** principles of quality protocols.	
6.5 Identify examples of quality waste protocols	Your answer should list and briefly describe **two** quality protocols, providing their full titles	
6.6 State the UK regulations which detail the three steps of the landfill waste acceptance procedures	State the full title of the relevant UK regulation and the appropriate sections.	
6.7 Describe the requirements within the three steps of the UK landfill waste acceptance procedures	Your answer should describe requirements for each of the **three** steps for waste acceptance at a landfill site.	

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VRQ405: Stakeholder communication and other non-legislative factors affecting the waste and resource management industry

Level: 4		
Learning Outcome		
1. Understand key stakeholders within the waste and resources management sector.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 List internal and external Stakeholders that can have an interest in the operation of a permitted waste facility.	Your answer should list **two** internal and **three** (UK) external stakeholders that can have an interest in the operation of a permitted waste facility. ***Please note:*** *to avoid repetition, your answer should not use members of the local community as an example stakeholder.*	
1.2 Describe how stakeholders can have an impact on the way a permitted waste facility is operated.	You should base your answer on the stakeholders that you identified in 1.1 above and tailor it to a permitted facility.	
1.3 Describe how communication and consultation can benefit a permitted waste facility's relationship with the local community.	Give **two** benefits to the waste facility of communicating and consulting with the local community. Your answer should include **two** ways that the site can communicate and consult with the local community.	
1.4 Describe how effective communication and consultation can improve relations within the workplace.	Your answer should describe **two** examples of how effective communication and consultation with employees at all levels of the business can improve working relationships.	

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1.5 Describe methods of communication used for different stakeholder groups.	Using the stakeholders you identified in 1.1, your answer should describe **two** methods of communication that could be used to communicate with each of these groups in an effective way. Your answer should refer to factors such as when they would be used and the content. ***Please note:*** *to avoid repetition, your answer should not use members of the local community as an example stakeholder.*	
Learning Outcome		
2. Understand the roles of the regulators working with the wastes and resources management		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 List the regulators who enforce regulations relevant to operating a permitted waste and resources management facility.	Your answer should list **three** regulators who enforce regulations for permitted waste management facilities.	
2.2 Explain the roles of regulators in enforcing permitted waste and resource management facilities.	Your answer should explain the roles of the regulators identified in 2.1 with specific reference to waste management facilities.	
2.3 Describe the powers of entry for regulators of permitted waste and resource management facilities.	Your answer should describe the powers of entry for each regulator that you identified in 2.1. Your answer must describe: • Any relevant regulation(s). • Any circumstances when entry is or is not permitted. • Any requirements on the officer to enforce their power of entry e.g. show a warrant card.	

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2.4 Describe enforcement actions which can be taken by regulators of permitted waste and resource management facilities.	Your answer should describe **one** enforcement option for **each** regulator identified in 2.1. Your answer must describe: • When the enforcement option for each regulator may/may not be used. • Any timescales involved. • Any responses available to the recipient e.g. right to appeal.	
Learning Outcome		
3. Understand how non-legislative factors affect changes in wastes and resource management practice.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Identify non-legislative factors which may affect waste and resources management practices.	Your answer should identify **three** non-legislative factors which may affect how waste and resource management practices change over time.	
3.2 Evaluate how non-legislative factors may influence how waste and resources are managed in the future.	Your answer should evaluate how each of the non-legislative factors identified in 3.1 may influence the management of waste and resources in the future. You should refer to the possible impacts on the UK waste and resources industry **AND** the influence these could have at a site level. Consider the possible outcomes with reasons to justify your answer.	
Learning Outcome		
4. Understand operator responsibilities for data collection, reporting, storage and retention in relation to a waste and resources management facility.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 List the types of data that are collected as specified within a permit.	Your answer should list **five** types of data that are collected as required by a permit. Your answer should include the relevant permit rules as set out in a specified Standard Rules Permit.	

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4.2 State the storage periods for data in line with current guidance.	Use the list of data in 4.1 and state storage periods for each referring to the document or guidance that stipulates the storage periods.	
4.3 Explain the methods of storing data.	Your answer should describe how data is stored for the items listed in 4.1.	
4.4 Identify recipients of data and reporting mechanisms.	Your answer should choose **two** of the data sets from 4.1 and describe: • The intended recipients of the data. • How the data will be reported/submitted.	
4.5 Describe factors that could negatively effect the collection, reporting or storage of data in line with permit requirements.	Describe **three** factors that could have a negative effect on the collection, reporting and storage of data in line with permit requirements.	
4.6 Describe the consequences of not collecting, reporting or storing data in line with permit requirements.	Describe **three** consequences of failure to collect, report and store data in line with permit requirements.	
Learning Outcome		
5. Understand the skills and training requirements for waste operations.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 List the skills required to manage waste operations.	List **five** managerial skills required for managers of waste operations. ***Hint:*** *Skills are defined as the knowledge, competencies and abilities to perform a task.*	
5.2 Describe how to ensure that relevant staff have the required skills and training.	Your answer should describe: • The checks on staff skills and training carried out. • The actions that could be taken to address deficiencies. • The records that must be kept.	
5.3 Describe how to communicate the programme of work and operational instructions to all site personnel both verbally and in writing.	Your answer should describe how to communicate a programme or work and operational instructions to all site personnel verbally and in writing.	

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5.4 Explain why it is important to ensure that staff understand instructions, and how to ensure this is achieved.	Your answer should explain: • Why it is important to ensure that staff understand instructions. • How to ensure that staff understand instructions.	

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SECTION 2 –
Optional Unit Group

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VRQ406: Principles and practices of managing a physical treatment processing facility

Level: 4		
Learning Outcome		
1. Understand how waste is received or rejected at a physical treatment facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe the procedures for waste reception at a physical treatment facility	Your answer should describe the organisational procedures for waste reception at a physical treatment facility, including the basic infrastructure and equipment needed.	
1.2 List the waste reception records kept at a physical treatment facility	Your answer should list **three** records that you keep relating to waste reception at a physical treatment facility.	
1.3 Describe the procedures for the rejection of waste from a physical treatment facility	Your answer should describe the procedures for the rejection of waste from a physical treatment facility, including storage and time scales that may be involved.	
Learning Outcome		
2. Understand the principles of physical treatment at a waste and resources treatment facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the physical treatment methods and the principles upon which they are based	Your answer should describe **three** physical treatment methods and the principles upon which they are based.	
2.2 Identify the waste types that can be treated using physical treatment methods	Your answer should identify **two** wastes types that can be treated by each of the physical treatment methods identified in 2.1.	

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2.3 Describe how different waste types can impact physical treatment methods	Your answer should describe how the waste types identified in 2.2 can impact on the treatment methods identified in 2.1.	
Learning Outcome		
3. Understand what emissions, products and residual wastes are associated with physical treatment methods and how these can be managed		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 List the emissions from physical treatment methods	Your answer should list **three** emissions from the physical treatment methods identified in 2.1.	
3.2 List the products from physical treatment methods	Your answer should list **two** products from the physical treatment methods identified in 2.1.	
3.3 Explain how emissions can be controlled and managed	Your answer should explain how the emissions identified in 3.1 can be controlled and managed.	
3.4 Describe the end uses of the products from physical treatment methods	Your answer should describe **one** end use of the two products identified in 3.2.	
3.5 Explain how residual waste from physical treatment methods can be controlled and managed	Your answer should explain how residual waste from physical treatment methods can be controlled and managed.	
Learning Outcome		
4. Understand the technical benefits, environmental benefits and problems associated with physical treatment methods		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Explain the technical benefits of physical treatment methods	Your answer should explain **two** technical benefits of the physical treatment methods identified in 2.1.	
4.2 Explain the environmental benefits of physical treatment methods	Your answer should explain **one** environmental benefit of the physical treatment methods identified in 2.1.	
4.3 Describe the problems associated with physical treatment methods	Your answer should describe **two** problems associated with each of the physical treatment methods identified in 2.1.	

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4.4 Explain how problems can be controlled and managed	Your answer should explain how the problems identified in 4.3 can be controlled and managed.	
4.5 Explain why it is important to ensure compliance with an Environmental Permit for a physical treatment facility	Your answer should explain **three** reasons why it is important to ensure compliance with an environmental permit for a physical treatment facility.	
Learning Outcome		
5. Understand the factors that may limit the uptake of physical treatment methods		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 List factors that may limit the use of physical treatment methods	Your answer should list **three** factors that may limit the use of physical treatment methods.	
5.2 Explain why certain factors may affect the use of physical treatment methods	Your answer should explain why certain factors may affect the use of physical treatment methods.	

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VRQ407: Principles and practices of managing a biological treatment processing facility

Level: 4		
Learning Outcome		
1. Understand how waste is received or rejected at a biological treatment facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe the procedures for waste reception at a biological waste treatment facility	Your answer should describe the organisational procedures for waste reception at a biological waste treatment facility, including the basic infrastructure and equipment needed.	
1.2 List the records that are kept at a biological waste treatment facility	Your answer should list **three** records that you keep relating to biological treatment.	
1.3 Describe the procedures for rejection of waste from a biological waste treatment facility	Your answer should describe the procedures for rejection of waste from a biological waste treatment facility.	
Learning Outcome		
2. Understand the principles of open windrow composting as a biological treatment process		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe open windrow composting and the principles upon which it is based	Your answer should describe the open windrow composting treatment method and the principles upon which it is based.	
2.2 Describe the quality protocol associated with open windrow composting	Your answer should describe the quality protocol that applies to open windrow composting.	
2.3 List waste types that can be treated by open windrow composting	Your answer should list **two** examples of waste types that can be treated by open windrow composting.	

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2.4 Describe how waste types can impact on open windrow composting	Your answer should describe how **one** of the waste types identified in 2.3 can impact on open windrow composting.	
2.5 List waste types that should not be treated by open windrow composting	Your answer should list **one** example of a waste type that should **not** be treated by open windrow composting.	
2.6 Explain why certain waste types should not be treated by open windrow composting	Your answer should explain why the waste type identified in 2.5 should **not** be treated by open windrow composting.	
2.7 Describe the limitations of open windrow composting	Your answer should describe **three** limitations of open windrow composting.	
Learning Outcome		
3. Understand the principles of in-vessel composting as a biological treatment process		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Describe in-vessel composting and the principles upon which it is based	Your answer should describe the in-vessel composting treatment method and the principles upon which it is based.	
3.2 Describe the quality protocol associated with in-vessel composting	Your answer should describe the quality protocol that applies to in-vessel composting.	
3.3 List waste types that can be treated by in-vessel composting	Your answer should list **two** examples of waste types that can be treated by in-vessel composting.	
3.4 Describe how waste types can impact on in-vessel composting	Your answer should describe how **one** of the examples identified in 3.3 can impact in-vessel composting.	
3.5 Describe the limitations of in-vessel composting	Your answer should describe **three** limitations of in-vessel composting.	
Learning Outcome		
4. Understand the principles of anaerobic digestion as a biological treatment process		
Assessment Criteria	**Indicative Content**	**Learner Answer**

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4.1 Describe anaerobic digestion and the principles upon which it is based	Your answer should describe the anaerobic digestion treatment method and the principles upon which it is based.	
4.2 Describe the quality protocol associated with anaerobic digestion	Your answer should describe the quality protocol that applies to anaerobic digestion.	
4.3 List waste types that can be treated by anaerobic digestion	Your answer should list **two** examples of waste types that can be treated by anaerobic digestion.	
4.4 Describe how waste types can impact on anaerobic digestion	Your answer should describe how **one** of the waste types identified in 4.3 can impact on anaerobic digestion.	
4.5 Describe the limitations of anaerobic digestion	Your answer should describe **three** limitations of anaerobic digestion.	
Learning Outcome		
5. Understand the technical benefits, environmental benefits and problems associated with biological treatment processes		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 Explain why it is beneficial to implement quality protocols for biological treatment	Your answer should identify and explain **two** benefits of implementing quality protocols for biological treatment.	
5.2 Describe the technical benefits associated with biological treatment processes.	For **one** type of biological treatment process, describe one technical benefit.	
5.3 Describe the environmental benefits associated with biological treatment processes.	For **one** type of biological treatment process, identify and explain **one** environmental benefit.	
5.4 Describe the potential problems associated with biological treatment processes.	For each of the biological treatment processes, describe a potential problem that could occur.	
5.5 Explain how potential problems can be controlled and managed.	Your answer should explain how each of the potential problems identified in 5.4 can be controlled and managed.	

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Learning Outcome		
6. Understand what emissions, products and residual wastes are associated with biological treatment processes and how these can be managed		
Assessment Criteria	**Indicative Content**	**Learner Answer**
6.1 List the emissions from biological treatment processes.	Your answer should list **two** emissions from each of the biological treatment processes.	
6.2 Explain how emissions from biological treatment processes can be controlled and managed	Your answer should explain how each of the emissions identified in 6.1 can be controlled and managed.	
6.3 List the products from biological treatment processes.	Your answer should list **one** product from each biological treatment process.	
6.4 Describe the end uses of products from biological treatment processes.	Your answer should describe **one** end use for each of the products identified in 6.3.	
6.5 Identify the residual wastes produced by biological treatment processes.	Your answer should identify **one** residual waste from each of the biological treatment processes.	
6.6 Explain how residual waste from biological treatment processes can be controlled and managed.	Your answer should explain how the residual waste identified in 6.5 can be controlled and managed.	
6.7 Explain why it is important to ensure compliance with an environmental permit for a biological treatment facility.	Your answer should explain **three** reasons why it is important to ensure compliance with an environmental permit for a biological treatment facility.	

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VRQ408: Principles and practices of managing a thermal treatment processing facility

Level: 4		
Learning Outcome		
1. Understand the principles of thermal treatment at a waste and resources treatment facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe the thermal treatment methods and the principles upon which they are based	Your answer should describe **three** thermal treatment methods and the principles upon which they are based.	
1.2 Identify the waste types that can be treated using thermal treatment methods	Your answer should identify **two** waste types that can be treated by each of the thermal treatment methods identified in 1.1.	
1.3 Describe how different waste types can impact thermal treatment methods	Your answer should describe how the waste types identified in 1.2 can impact on the treatment methods identified in 1.1.	
1.4 Explain the limitations of thermal treatment methods	Your answer should explain **one** limitation for each of the thermal treatment methods identified in 1.1.	
Learning Outcome		
2. Understand how waste is received or rejected at a thermal treatment facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the procedures for waste reception at a thermal treatment facility	Your answer should describe the organisational procedures for waste reception at a thermal treatment facility, including the basic infrastructure and equipment needed.	
2.2 List the waste reception records kept at a thermal treatment facility	Your answer should list **three** records that you keep relating to waste reception at a thermal treatment facility.	

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2.3 Describe the procedures for the rejection of waste from a thermal treatment facility	Your answer should describe the procedures for the rejection of waste from a thermal treatment facility.	
Learning Outcome		
3. Understand what emissions, products and residual wastes are associated with thermal treatment methods and how these can be managed		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 List the emissions from thermal treatment methods	Your answer should list **three** emissions from the thermal treatment methods identified in 1.1.	
3.2 List the products from thermal treatment methods	Your answer should list **two** products from the thermal treatment methods identified in 1.1.	
3.3 Explain how emissions can be controlled and managed	Your answer should explain how the emissions identified in 3.1 can be controlled and managed.	
3.4 Describe the end uses of the products from thermal treatment methods	Your answer should describe **one** end use of the **two** products identified in 3.2.	
3.5 Explain how residual waste from thermal treatment methods can be controlled and managed	Your answer should explain how residual waste from thermal treatment methods can be controlled and managed.	
Learning Outcome		
4. Understand the technical benefits, environmental benefits and problems associated with thermal treatment methods		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Explain the technical benefits of thermal treatment methods	Your answer should explain **two** technical benefits of the thermal treatment methods identified in 1.1.	
4.2 Explain the environmental benefits of thermal treatment methods	Your answer should explain **one** environmental benefit of the thermal treatment methods identified in 1.1.	
4.3 Describe the problems associated with thermal treatment methods	Your answer should describe **two** problems associated with each of the thermal treatment methods identified in 1.1.	

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4.4 Explain how problems can be controlled and managed	Your answer should explain how the problems identified in 4.3 can be controlled and managed.	
4.5 Explain why it is important to ensure compliance with an environmental permit for a thermal treatment facility	Your answer should explain **three** reasons why it is important to ensure compliance with an environmental permit for a thermal treatment facility.	

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VRQ409: Principles and practices of managing land remediation activities

Level: 4		
Learning Outcome		
1. Understand the circumstances for which land remediation activities take place		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Explain why land may need to be remediated.	Your answer should give **three** reasons why land may need to be remediated.	
1.2 Explain the role of the following in land remediation: • The desk study. • The site investigation. • The conceptual model.	Your answer should explain the role of the **three** activities listed.	
1.3 Describe the methods used to investigate contaminated land.	Your answer should give **three** examples of the methods used to investigate contaminated land.	
1.4 Describe the purpose of a risk assessment in relation to contaminated land.	Your answer should describe the purpose of a risk assessment in relation to contaminated land.	
Learning Outcome		
2. Understand the legislative requirements for land remediation activities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the legislative requirements, regulations, codes of practice and guidance applicable to land remediation activities.	Your answer should: • Identify **three** pieces of legislation relating to land contamination. • Describe **two** of the identified pieces of legislation in relation to managing a land remediation activity. • Identify **three** sources of information and guidance relating to land remediation practices.	

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2.2 Describe the planning permission, permit requirements, deployment form and environmental management system (EMS) required for land remediation activities.	Your answer should describe the planning permission, permit requirements, deployment form and environmental management system (EMS) required for land remediation activities.	
Learning Outcome		
3. Understand the role of environmental permit conditions in forming the framework for land remediation activities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Identify the environmental permit conditions that relate to the environmental risks posed by land remediation activities.	Your answer should identify **four** conditions relating to environmental risks within the standard rules permit for remediation of contaminated land.	
3.2 Describe the points of interaction between an environmental permit and a deployment form.	Your answer should describe **four** points of interaction between the environmental permit and the deployment form.	
Learning Outcome		
4. Understand the definition of waste relating to land remediation activities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Define waste in relation to land remediation activities.	Your answer should provide the legal definition of waste in relation to land remediation activities.	
4.2 Describe the circumstances in which soils are considered to: • Be non-waste. • Have ceased to be waste after treatment.	Your answer should describe **two** circumstances in which soils may be considered to be non-waste or have ceased to be waste after treatment.	
Learning Outcome		
5. Understand the principles employed in the selection and use of different techniques for remediation of land affected by contamination		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 Explain the role of: • The options appraisal. • The remediation strategy.	Your answer should explain the role of the **five** activities listed.	

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• The implementation plan. • The verification plan. • The monitoring and maintenance plan.		
5.2 Describe the key features of: • A verification plan. • A monitoring and maintenance plan.	Your answer should describe **two** elements from: • A verification plan. • A monitoring and maintenance plan.	
5.3 Define in-situ and ex-situ remediation.	Your answer should provide clear definitions of in-situ and ex-situ remediation.	
5.4 Describe an in-situ remediation technique that may be employed under an environmental permit.	Your answer should give **one** example of an in-situ remediation technique that may be employed under an environmental permit.	
5.5 Describe the ex-situ remediation techniques that may be employed under an environmental permit.	Your answer should give **two** examples of ex-situ remediation techniques that may be employed under an environmental permit.	
5.6 Describe the remediation strategy for a specific site.	For a site of your choosing, describe the remediation strategy ensuring your answer includes: • **Two** examples of remediation techniques. • **One** reason why each of the remediation. • Techniques have been chosen.	
Learning Outcome		
6. Understand the environmental impacts associated with land remediation activities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
6.1 Describe the environmental impacts associated with in-situ and ex-situ remediation techniques.	Your answer should: • Describe **two** potential environmental impacts of **one** in-situ remediation technique.	

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	• Describe **two** potential environmental impacts of **two** ex-situ remediation techniques.	
6.2 Describe the control measures to reduce or eliminate risks to the environment.	Your answer should describe **two** control measures for each example identified in 6.1.	

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VRQ410: Principles and practices of managing an inert landfill

Level: 4		
Learning Outcomes		
1. Understand the principles of environmental permitting for the design, construction and operation of inert landfills		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe the legislative requirements, regulations, codes of practice and guidance applicable to an inert landfill.	Your answer should describe the legislative requirements, regulations, codes of practice and guidance applicable to an inert landfill.	
1.2 List the criteria that should be met when undertaking a site investigation for the development of an inert landfill.	Your answer should list **three** criteria that should be met when undertaking a site investigation for the development of an inert landfill.	
1.3 Explain why it is important to meet the criteria for an inert landfill site investigation.	For **two** of the criteria identified in 2.1, explain why it is important that a site investigation for the development of an inert landfill meets these criteria.	
1.4 Identify the key requirements of an Environmental Risk Assessment for an inert landfill.	Your answer should identify **five** key requirements of an environmental risk assessment for an inert landfill. These should **not** cover any of the requirements already included in the Environment Agency's generic risk assessment for the use and disposal of inert waste to land.	
1.5 Describe the requirements for the placement and integrity of the geological barrier and its protection from the initial layer of inert waste.	Your answer should describe **two** engineering requirements for the development of a geological barrier at an inert landfill site.	

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1.6 Describe the site procedures required for the management control of cell preparation operations.	Your answer should describe the site procedures managing cell preparation operations.	
1.7 Describe the control and management systems needed for surface water drainage.	Your answer should describe the surface water drainage control and management systems needed for an inert landfill.	
1.8 Explain why it is important to monitor the site hydrogeological conditions.	Your answer should: • Identify the importance of monitoring site hydrogeological conditions using a hydrogeological risk assessment. • Identify the consequences of failing to monitor the site hydrogeological conditions.	
1.9 Describe the permit requirements relevant to hydrogeological conditions.	Your answer should describe the permit requirements relevant to hydrogeological conditions.	
Learning Outcomes		
2. Understand the definition and types of inert waste		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Define inert waste in relation to landfill activities.	Your answer should: • Provide a legal definition of inert waste in relation to landfill activities. • List **three** examples of inert waste.	
Learning Outcomes		
3. Understand waste treatment and testing requirements		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Describe the legislative requirements, codes of practice and guidance applicable to the reception of inert waste at an inert landfill.	Your answer should describe the legislative requirements, codes of practice and guidance applicable to the reception of inert waste at an inert landfill.	

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3.2 Describe the regulatory requirements and organisational procedures for dealing with unauthorised wastes.	Your answer should describe the regulatory requirements and procedures for dealing with unauthorised wastes.	
3.3 Describe the waste inspection, identification procedures and handling requirements for the types of inert waste received on site.	Your answer should: • Describe the pre-acceptance requirements for an inert landfill. • Distinguish between the testing regimes for inert wastes: - Regularly generated by the same process - Not regularly generated	
3.4 Describe the uses, purposes and processing requirements for documents relating to the reception and validation of inert waste received on the site.	Your answer should describe the uses, purposes and processing requirements for **two** documents relating to the reception and validation of inert waste received on the site.	
3.5 Describe the records required by legislation and by organisational procedures relating to the reception, inspection and validation of inert wastes.	Your answer should describe the records required by legislation and organisational procedures relating to the reception, inspection and validation of inert wastes.	
Learning Outcomes		
4. Understand the environmental and amenity impacts associated with inert landfill and how they can be managed		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Describe the processes on an inert landfill that could impact: • The environment • Amenities	Your answer should describe the processes on an inert landfill that could impact: • The environment • Amenities	
4.2 Explain how these processes are monitored to minimise the impact of an inert landfill on the environment and amenities	Your answer should outline **two** actions that should be implemented to monitor the environmental and amenity impacts of an inert landfill.	

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4.3 List the emissions from an inert landfill	Your answer should list **three** potential emissions from inert landfills.	
4.4 Describe the potential pathways and receptors for emissions from an inert landfill	For the **three** potential emissions listed in 4.3, describe the potential pathways and receptors.	
4.5 Describe the methods of controlling and managing the impacts from inert landfill emissions	Your answer should describe **two** methods of controlling and managing the impacts from the inert landfill emissions listed in 4.3.	
Learning Outcomes		
5. Understand site closure, aftercare and permit surrender requirements		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 Describe the legislative requirements, regulations, codes of practice and guidance applicable to restoring and preparing landfill sites for aftercare.	Your answer should describe the legislative requirements, codes of practice and guidance applicable to restoring and preparing landfill sites for aftercare.	
5.2 Explain why it is important to develop a restoration and aftercare scheme for an inert landfill.	Your answer should explain why it is important to develop a restoration and aftercare scheme for an inert landfill.	
5.3 Describe the records required in relation to the closure and aftercare of landfill sites.	Your answer should describe **three** records required by the regulator for the closure and aftercare of landfill sites.	
5.4 Describe the methods used to deal with birds, vermin, insects, dust, noise and litter during restoration and aftercare operations.	Your answer should describe **two** methods used to deal with birds, vermin, insects, dust, noise and litter during restoration and aftercare operations.	
5.5 Describe the process of surrendering an environmental permit for an inert landfill.	Your answer should describe the process of surrendering an inert landfill permit; including **two** actions or criteria that need to be satisfied as part of the process.	

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VRQ411: Principles and practices of managing a mechanical biological treatment facility

Level: 4		
Learning Outcome		
1. Understand how waste is received or rejected at a mechanical biological treatment facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe the procedures for waste reception at a mechanical biological treatment facility	Your answer should describe the organisational procedures for waste reception at a mechanical biological treatment facility, including the basic infrastructure and equipment needed.	
1.2 List the waste reception records kept at a mechanical biological treatment facility	Your answer should list **three** records that you keep relating to waste reception at a mechanical biological treatment facility.	
1.3 Describe the procedures for the rejection of waste from a mechanical biological treatment facility	Your answer should describe the procedures for the rejection of waste from a mechanical biological treatment facility.	
Learning Outcome		
2. Understand the principles of mechanical biological treatment at a waste and resources treatment facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the mechanical biological treatment methods and the principles upon which they are based	Your answer should describe the mechanical biological treatment methods and the principles upon which they are based.	
2.2 Identify the waste types that can be treated using mechanical biological treatment methods	Your answer should identify **two** wastes types that can be treated by each of the mechanical biological treatment methods identified in 2.1.	

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2.3 Describe how different waste types can impact mechanical biological treatment methods	Your answer should describe how the waste types identified in 2.2 can impact on the treatment methods identified in 2.1.	
2.4 Explain the limitations of mechanical biological treatment methods	Your answer should explain **three** limitations for each of the mechanical biological treatment methods identified in 2.1.	
Learning Outcome		
3. Understand the technical benefits, environmental benefits and problems associated with mechanical biological treatment methods		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Explain the technical benefits of mechanical biological treatment methods	Your answer should explain **two** technical benefits of the mechanical biological treatment methods identified in 2.1.	
3.2 Explain the environmental benefits of mechanical biological treatment methods	Your answer should explain **one** environmental benefit of the mechanical biological treatment methods identified in 2.1.	
3.3 Describe the potential problems associated with a mechanical biological treatment methods	Your answer should describe **three** problems associated with each of the mechanical biological treatment methods identified in 2.1.	
3.4 Explain how problems can be controlled and managed	Your answer should explain how the problems identified in 3.3 can be controlled and managed.	
Learning Outcome		
4. Understand the factors that may limit the uptake of mechanical biological treatment methods		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 List factors that may limit the use of mechanical biological treatment methods	Your answer should list the factors that may limit the use of mechanical biological treatment methods.	

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4.2 Explain why certain factors may affect the use of mechanical biological treatment methods	Your answer should explain why certain factors may affect the use of mechanical biological treatment methods.	
Learning Outcome		
5. Understand what emissions, products and residual wastes are associated with mechanical biological treatment processes and how these can be managed		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 List the key emissions from mechanical biological treatment methods	Your answer should list **three** emissions from mechanical biological treatment methods identified in 2.1.	
5.2 Explain how emissions from mechanical biological treatment methods can be controlled and managed	Your answer should explain how the emissions identified in 4.1 can be controlled and managed.	
5.3 List two products from the mechanical biological treatment methods	Your answer should list **two** products from mechanical biological treatment identified in 2.1.	
5.4 Describe the end uses of the products from mechanical biological treatment methods	Your answer should describe **one** end use of the two products identified in 4.3.	
5.5 Explain how residual waste from mechanical biological treatment methods can be controlled and managed	Your answer should explain how residual waste from mechanical biological treatment methods can be controlled and managed.	
5.6 Explain why it is important to ensure compliance with an Environmental Permit for a mechanical biological treatment facility	Your answer should explain **three** reasons why it is important to ensure compliance with an environmental permit for a mechanical biological treatment facility.	

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VRQ412: Principles and practices of managing an end of life vehicle facility

Level: 4		
Learning Outcomes		
1. Understand how waste is received or rejected at an end of life vehicle facility.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe UK regulations that directly affect end of life vehicle facilities.	Your answer should: • Identify the relevant regulations. • Describe the relevant regulations, in terms of their key principles and requirements for both operators and producers.	
1.2 Describe the procedures for waste reception at an end of life vehicle facility.	Your answer should describe the procedures for waste reception at a dismantling and depollution facility. Ensure your answer makes reference to Certificates of Destruction.	
1.3 List the records kept on an end of life vehicle facility and the length of time they should be kept.	Your answer should list **three** records that you keep on an end of life vehicle facility and the length of time they should be kept.	
1.4 Describe the procedures for rejection of waste from an end of life vehicle facility.	Your answer should describe the procedures for the rejection of waste from an end of life vehicle facility.	
Learning Outcomes		
2. Understand the principles of dismantling and depollution at an end of life vehicle facility.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the end of life vehicle dismantling methods and the principles upon which they are based.	Your answer should describe: • The end of life vehicle dismantling methods. • The principles upon which they are based. • The types of equipment required during the process.	

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2.2 Describe the end of life vehicles categories.	Your answer should describe **two** categories of end of life vehicles	
2.3 List what should be removed when depolluting an end of life vehicle.	Your answer should list what should be removed when depolluting an end of life vehicle.	
2.4 Explain why certain items should be removed from an end of life vehicle.	Explain why the items listed in 2.3 should be removed from an end of life vehicle. Make reference to the International Dismantling Information System (IDIS) in your answer	
2.5 Describe how certain items can impact on the depollution process.	For **four** of the items listed in 2.3, describe how four can impact on the depollution process. ***Hint:*** *you will need to consider relevant health and safety factors in your answer, as well as the practicalities of item removal.*	
2.6 Describe the order in which items and liquids should be removed from an end of life vehicle.	Your answer should describe the order in which items should be removed from an end of life vehicle.	
2.7 Explain why items should be removed from an end of life vehicle in this particular order.	Your answer should explain why items should be removed from an end of life vehicle in the order described in 2.6.	
2.8 Describe how all recovered/ removed parts and materials should be stored.	Your answer should describe how **all** recovered/removed parts and materials should be stored.	
2.9 Explain the limitations of the dismantling and depollution process for end of life vehicles.	Your answer should explain **three** limitations of the dismantling and depollution process for end of life vehicles. ***Hint:*** *you will need to consider relevant environmental and health and safety factors in your answer.*	
Learning Outcomes		
3. Understand the health, safety and environmental benefits and hazards associated with dismantling and depollution processes.		
Assessment Criteria	**Indicative Content**	**Learner Answer**

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3.1 Describe the benefits of complying with health and safety procedures during the dismantling and depollution process.	Your answer should describe **two** benefits of complying with health and safety procedures during the dismantling and depollution process.	
3.2 Describe the environmental benefits associated with the dismantling and depollution process.	Your answer should describe **two** environmental benefits associated with the dismantling and depollution process.	
3.3 Describe the potential hazards associated with the dismantling and depollution process.	Your answer should describe: • **Two** potential hazards associated with the dismantling and depollution process. • **Two** potential hazards associated with handling electric and hybrid vehicles. • **Two** potential hazards associated with hazardous components e.g. catalytic converters. ***Hint:*** *for each hazard you will need to consider relevant environmental and health and safety factors.*	
3.4 Describe the risks associated with the dismantling and depollution process can be controlled and managed.	Your answer should describe the risks associated with the dismantling and depollution process can be controlled and managed. ***Hint:*** *refer to the hierarchy of control in your answer.*	

Learning Outcomes		
4. Understand what pollutants and residual wastes are associated with dismantling and depollution processes and how these can be managed.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Describe the impact of potential pollutants from the dismantling and depollution process on: • The environment • Amenities	Your answer should describe the impact of **four** potential pollutants from the dismantling and depollution process on the environment and amenities.	

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	Hint: *refer to the source pathway receptor principle in your answer.*	
4.2 Explain how pollutants can be controlled and managed.	Your answer should explain how **two** of the pollutants identified in 4.1 can be controlled and managed.	
4.3 Identify the products and materials removed from an end of life vehicle that can be prepared for re-use and/or recycled according to the waste hierarchy.	Using the waste hierarchy, your answer should identify which products and materials removed from an end of life vehicle can be prepared for re-use and/or recycled.	
4.4 Describe the paperwork required when loads of products and materials are removed from the site.	Your answer should describe the paperwork required when hazardous and non-hazardous products and materials identified in 4.3 are removed from the site.	
4.5 List the waste residues produced during the dismantling and depollution process.	Your answer should list the waste residues produced during the dismantling and depollution process.	
4.6 Explain how waste residues from the dismantling and depollution can be controlled and managed.	Your answer should explain how the waste residues listed in 4.5 can be controlled and managed.	
4.7 Explain why it is important to ensure compliance with an environmental permit for an end of life vehicle facility	Your answer should explain **three** different reasons why it is important to ensure compliance with an environmental permit for an end of life vehicle facility	

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VRQ413: Principles and practices of managing a metals recycling facility

Level: 4		
Learning Outcome		
1. Understand how waste is received or rejected at a metals recycling facility.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe UK legislative requirements and regulations that directly affect metal recycling facilities.	Your answer should: • Identify the relevant legislative requirements and regulations. • Describe the relevant legislative requirements and regulations, in terms of their key principles and requirements for both operators and producers.	
1.2 Describe the procedures for waste reception at a metals recycling facility.	Your answer should describe the procedures for waste reception at a metals recycling facility, including the basic infrastructure and equipment needed.	
1.3 List the records kept on a metals recycling facility and the length of time they should be kept.	Your answer should list **three** records that you keep on a metals recycling facility and the length of time they should be kept.	
1.4 Describe the procedures for the rejection of waste from a metals recycling facility.	Your answer should: • Describe the procedures for the rejection of waste from a metals recycling facility. • Describe the procedure to deal with non-conforming waste found in an accepted load, including storage and time scales that may be involved.	
Learning Outcome		
2. Understand the principles of metals recycling at a waste and resources treatment facility.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the metals recycling treatment methods and the principles upon which they are based.	Your answer should describe the different metals recycling treatment methods	

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	available and the principles upon which they are based.	
2.2 Identify the metal types and grades that can be treated by the metals recycling process.	Your answer should identify the metal types and grades (e.g. 4C, 8B and 3B) that can be treated by the metals recycling process.	
2.3 Describe the stages of the metals recycling treatment process for metal types and grades.	Your answer should describe all stages of the metals recycling treatment process for the metal types and grades identified in 2.2.	
2.4 Explain limitations of the metals recycling treatment process.	Your answer should explain **three** limitations of the metals recycling treatment process.	
Learning Outcome		
3. Understand the environmental benefits and hazards associated with metals recycling.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Explain the environmental benefits of metals recycling.	Your answer should explain **two** environmental benefits of metal recycling.	
3.2 Describe potential hazards associated with the metals recycling process.	Your answer should describe: • **Three** potential hazards associated with the metals recycling process. • The hazards associated with handling hazardous items e.g. lithium ion batteries.	
3.3 Explain how the risks posed by the hazards identified can be controlled and managed.	Your answer should explain how the risks posed by the hazards identified in 3.2 can be controlled and managed. ***Hint:*** *refer to the hierarchy of control in your answer.*	
Learning Outcome		
4. Understand what emissions and residual waste are associated with metals recycling processes and how these can be managed.		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 List the key emissions from the metals recycling process.	Your answer should list the key emissions from the metals recycling process.	
4.2 Explain how emissions can be controlled and managed.	For the emissions identified in 4.1, explain the control measures that can be put in place.	

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	Hint: *refer to the source pathway receptor principle in your answer.*	
4.3 List the waste residues from the metal recycling treatment process.	Your answer should list the waste residues from the metal recycling treatment process.	
4.4 Explain how waste residues from metals recycling treatment can be controlled and managed.	Your answer should explain how each of the waste residues identified in 4.3 can be controlled and managed.	
4.5 Explain where different materials are transferred at the end of the metals recycling process.	Your answer should explain where different materials are transferred at the end of the metals recycling process.	
4.6 Describe the paperwork required when materials are transferred and how it should be completed.	Your answer should describe the paperwork required when these loads are transferred and how it should be completed.	
4.7 Explain why it is important to ensure compliance with an environmental permit for a metals recycling facility.	Your answer should give **three** reasons why it is important to ensure compliance with an Environmental Permit for a Metals Recycling Facility.	

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VRQ414: Principles and practices of managing a hazardous waste storage facility

Learning Outcome		
1. Understand how waste is received or rejected at a hazardous waste storage facility		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe the legislative requirements, codes of practice and guidance applicable to the reception and storage of hazardous waste on site	Your answer should: • Identify the relevant Legislation. • Describe the relevant regulations, in terms of their key principles and requirements for both operators and producers. • Codes of Practice • Regulatory Guidance Notes (RGN)	
1.2 Describe the procedures for waste reception at a hazardous waste storage facility	Your answer should describe the organisational procedures for waste reception at a hazardous waste storage facility.	
1.3 List the waste reception records kept at a hazardous waste storage facility	Your answer should list **four** records that you keep relating to waste reception at a hazardous waste storage facility.	
1.4 Describe the procedures for the rejection of waste from a hazardous waste storage facility	Your answer should describe the procedures for the rejection of waste from a hazardous waste storage facility.	
1.5 Explain the process for recording and reporting hazardous waste consignee returns to consignor and the regulator	Your answer should explain the process for recording and reporting hazardous waste consignee returns to consignor and the regulator: • Information recorded when accepting hazardous waste at a recovery or disposal facility • Rejected loads • Self-disposal returns • Consignment note errors	

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	• Mistakes or omissions on returns (including how to correct and resubmit the return) ***Hint:*** *Remember to include time scales in your answer.*	
Learning Outcome		
2. Understand the principles of hazardous waste storage		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the procedures for the management and storage of hazardous waste in terms of: • How waste is stored • How waste is segregated • How waste is identified	Your answer should describe the procedures for the management and storage of hazardous waste in terms of: • How waste is stored • How waste is segregated • How different wastes are identified	
2.2 Identify the waste types that can be stored at a hazardous waste storage facility	Your answer should identify **two** wastes types that can be stored at a hazardous waste storage facility using the methods described in 2.1.	
2.3 Describe the procedures for: • Transport operations • Supplying transport resources • Using transport resources	Your answer should describe the procedures for: • Transport operations • Supplying transport resources • Using transport resources (e.g. vehicles and ancillary equipment involved in the safe transfer and transport of waste)	
2.4 Explain the requirements for the following: • Sealed drainage • Impermeable base • Secondary containment for liquid wastes	Your answer should explain the requirements for the following: • Sealed drainage • Impermeable base • Secondary containment for liquid wastes	
Learning Outcome		
3. Understand the hazards associated with hazardous waste storage		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 Describe the potential hazards associated with hazardous waste storage in relation to: • Health and safety	Your answer should describe:	

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• Environment	• **Two** potential hazards associated with hazardous waste storage in relation to health and safety • **Two** potential hazards associated with hazardous waste storage in relation to the environment	
3.2 Explain how the risks posed by the hazards identified can be controlled and managed	Your answer should explain how the risks posed by the hazards identified in 3.1 can be controlled and managed. ***Hint:*** *refer to the hierarchy of control stages in your answer for the health and safety hazards.*	
Learning Outcome		
4. Understand what emissions are associated with hazardous waste storage and how these can be managed		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 List the key emissions from a hazardous waste storage facility	Your answer should list **two** key emissions from a hazardous waste storage facility.	
4.2 Explain how emissions can be controlled and managed	For each of the emissions identified in 4.1, explain **two** control measures that can be put in place. ***Hint:*** *refer to the source pathway receptor principles in your answer.*	
4.3 Explain why it is important to ensure compliance with an environmental permit for a hazardous waste storage facility	Your answer should give **three** reasons why it is important to ensure compliance with an Environmental Permit for a hazardous storage facility.	
4.4 Identify the resources available to deal with a spillage on site	Your answer should identify **three** pieces of equipment available to deal with spillages on site	
4.5 Explain how to use resources in environmental incidents and how any waste materials will be stored prior to disposal	Your answer should explain how: • The equipment listed in 4.4 is used to deal with a spillage • The waste material is stored prior to disposal	

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VRQ415: Principles and practices of managing land spreading activities

Learning Outcome		
1. Understand legislative requirements for land spreading activities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
1.1 Describe the legislative requirements, regulations, codes of practice and guidance applicable to land spreading activities	Your answer should describe the legislative requirements, regulations, codes of practice and guidance (e.g. regulatory guidance notes) applicable to land spreading activities.	
1.2 Describe the process for completion and submission of the required deployment form for land spreading activities	Your answer should: • Provide a description of the process for completing the deployment form. • Provide a description of the key requirements in relation to each section (A to F excluding section C) of the deployment form. • Provide a description of the process for submitting the deployment form to the regulator. • Your answer should include examples for each section (i.e. risk assessments or lists of waste streams required) in the format provided by the regulator. • Refer to the EWC/LoW Codes within your answer ***Hint:*** *You can refer to a parcel of land as a field in your answer.*	
1.3 Identify the supporting documentation that would be required to apply for a deployment for a Landspreading Permit	Your answer should list and give a brief description of the documents required to support the deployment application.	

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1.4 Explain why a new deployment may be required and the requirements to vary an existing deployment	Your answer should explain: • **Four** or more reasons why a new deployment application may be required • The requirements to vary an existing deployment with the regulator	
1.5 Describe the planning permission, permit requirements and environmental management system (EMS) required for land spreading activities	Your answer should describe each of the following required for land spreading activities: • Planning permission • Permit requirements • Environmental management system (EMS)	
Learning Outcome		
2. Understand how waste is received or rejected in relation to land spreading activities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
2.1 Describe the procedures for waste reception in relation to land spreading activities	Your answer should describe the organisational procedures for waste reception in relation to land spreading activities.	
2.2 Identify the waste reception records kept in relation to land spreading activities	Your answer should identify **five** records that you keep relating to waste reception in preparation for land spreading activities.	
2.3 Describe procedures for the storage and management of the waste for landspreading	Your answer should describe procedures for storing and managing waste for land spreading. Your answer should refer to conditions within the Permit and deployment, including those for stackable and non - stackable wastes.	
2.4 Describe the procedures for the rejection of waste in relation to land spreading activities	Your answer should describe the procedures for the rejection of waste in relation to land spreading activities.	
Learning Outcome		

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3. Understand the principles of land spreading		
Assessment Criteria	**Indicative Content**	**Learner Answer**
3.1 List the types of waste handling equipment applicable to land spreading	List **five** or more pieces of waste handling equipment to include attachments used for land spreading. This may also include any equipment used to treat waste prior to spreading.	
3.2 Describe the methods of spreading waste to land and the principles upon which they are based	Your answer should describe **three** methods of spreading waste to land and the principles upon which they are based, taking into account at least **two** pieces of waste handling equipment listed in 3.1.	
3.3 Identify the waste types that can be spread to land	Your answer should identify **two** wastes types that can be spread to land using the **three** methods described in 3.2.	
3.4 Describe the benefits associated with different methods of spreading waste to land.	Your answer should describe the benefits associated with the **three** methods of spreading waste to land selected in 3.2	
3.5 Explain the risks associated with different methods of spreading waste to land.	Your answer should explain **four** risks associated with the **three** methods of spreading waste to land selected in 3.2.	
3.6 Explain the testing requirement prior, during and after land spreading has taken place for Sewage Sludge	Your answer should explain the testing requirement prior, during and after land spreading has taken place for Sewage Sludge Your response should take into account good / best practice.	
Learning Outcome		
4. Understand the hazards associated with land spreading activities		
Assessment Criteria	**Indicative Content**	**Learner Answer**
4.1 Explain the environmental benefits of land spreading	Your answer should explain **two** environmental benefits of land spreading	

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4.2 Describe the potential hazards associated with land spreading activities in relation to health and safety	Your answer should describe t**wo** potential hazards associated with land spreading activities in relation to health and safety.	
4.3 Explain how the risks posed by the hazards identified can be controlled and managed	Your answer should explain how the risks posed by the hazards identified in 4.2 can be controlled and managed. ***Hint:*** *refer to the hierarchy of control in your answer.*	
Learning Outcome		
5. Understand what emissions and residual waste are associated with land spreading activities and how these can be managed		
Assessment Criteria	**Indicative Content**	**Learner Answer**
5.1 List the key emissions from land spreading activities	Your answer should list **three** key emissions from land spreading activities.	
5.2 Explain how emissions can be controlled and managed	For the emissions identified in 4.1, explain **two** control measures that can be put in place. ***Hint:*** *refer to the source pathway receptor principles in your answer.*	
5.3 Describe the legal and best practice requirements for the following: • Sealed drainage and an impermeable base • Secondary containment for liquid wastes • Maximum capacity's and freeboard of lagoons and containers	Your answer should describe the requirements for the following: • Sealed drainage and an impermeable base • Secondary containment for liquid wastes • Maximum capacity's and freeboard of lagoons and containers	
5.4 Explain how field drainage systems can impact watercourse contamination and how this can be controlled	Your answer should explain how field drainage systems can impact watercourse contamination and how this can be controlled.	
5.5 Identify the resources available to deal with a spillage on site	Your answer should identify **three** pieces of equipment available to deal with spillages on site.	

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Qualification Structure

To achieve this qualification, you must complete a minimum of 6 units to achieve the qualification. This should be made up of the 5 units from the Mandatory Group and 1 unit from the Optional Group:

Mandatory Units

Ofqual Code	Title	Level	Unit Code
M/617/2098	Health and safety in the waste and resource management industry	4	VRQ401
T/617/2099	Environmental protection in the waste and resource management industry	4	VRQ402
D/617/2100	Principles of sustainable waste and resource management	4	VRQ403
H/617/2101	Legislation for the operation of a waste management facility	4	VRQ404
K/617/2102	Stakeholder communication and other non-legislative factors affecting the waste and resource management industry	4	VRQ405

Optional Units

Ofqual Code	Title	Level	Unit Code
M/617/2103	Principles and practices of managing a physical treatment processing facility	4	VRQ406
T/617/2104	Principles and practices of managing a biological treatment processing facility	4	VRQ407
A/617/2105	Principles and practices of managing a thermal treatment processing facility	4	VRQ408
F/617/2106	Principles and practices of managing land remediation activities	4	VRQ409
J/617/2107	Principles and practices of managing an inert landfill	4	VRQ410
L/617/2108	Principles and practices of managing a mechanical biological treatment facility	4	VRQ411
R/617/2109	Principles and practices of managing an end of life vehicle facility	4	VRQ412
J/617/2110	Principles and practices of managing a metals recycling facility	4	VRQ413
F/618/1159	Principles and practices of managing a hazardous waste storage facility	4	VRQ414
T/618/1160	Principles and practices of managing land spreading activities	4	VRQ415

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