

Level 2, 3 and 4 Apprenticeship in Sustainable Resource Management

Apprenticeships Framework



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1. What is an Apprenticeship?

Apprenticeships are nationally recognised, work-based training programmes designed around the needs of employers to facilitate the development of practical, job specific skills by allowing inexperienced individuals to work alongside more experienced staff.

Statistics released by the Department for Business, Innovation and Skills (2013) indicate that in 2011/12 Apprenticeships starts increased by 13.9% compared to the previous year.

This increase can be attributed to the Government as they continue to place emphasis on using Apprenticeships to combat unemployment and boost the UK's ability to compete in global markets.

By completing an apprenticeship, individuals gain a qualification that is valued by employers and enhances their prospects for career progression in the future.

According to the National Apprenticeship Service (2013), an apprenticeship can take between one and four years to complete depending on the level of the Apprenticeship, the individuals' ability and the industry in which they are based.

Due to the time it takes to complete an apprenticeship, individuals have the opportunity to earn a wage (the minimum salary is £2.68 per hour), while working to gain job-specific skills. Employers therefore use apprenticeships to train both new and existing employees who are moving into a new or changed job role and need to learn new skills.

1.1 What does an Apprenticeship involve?

Apprenticeships are designed with input from employers in the industry sectors, and offer a structured programme that takes individuals through the skills they need to undertake their job to a high standard. The Government covers a proportion of the cost associated with training apprentices; however, this is dependent on the age of the apprentice and employers are responsible for paying their apprentices wages.

The majority of the training is 'on-the-job' at the employer premises working alongside experienced staff, while the remaining training is delivered 'off-the-job' by a specialist training provider – usually on a day or block release basis. A paper by Asset Skills (2011) suggests that individuals looking to apply for an apprenticeship placement in today's competitive market would benefit from having a range of skills and attributes, including:

- Confidence
- Interview skills
- Communication skills
- Problem solving skills
- Independent and team working skills
- Basic literacy, numeracy and IT skills

2. Industry Overview

2.1 Definition

The waste and resource management industry can be defined as “the collection, transport, disposal and final management of waste and recyclables, including the supervision of such operations and the after care of disposal sites, including actions taken as a dealer or broker” (Energy and Utility Skills, 2010).

2.2 The industry’s role in the UK economy

Despite concerns about growth in the wider economy, the waste and resource management industry is showing positive economic activity by generating £11 billion per year (Spelman, 2012), while experiencing a 60% increase in corporate finance and investment deals during the second half of 2012 (Read, 2013). This economic activity is driven by three key trends:

- Minimising wastage
- Extracting greater value from waste through recycling
- Energy from Waste

This activity relates to the growing popularity of the circular economy which aims to shift away from the buy-consume-dispose culture of today’s society which generates 434 million tonnes of waste every year (Defra, 2011), towards an economy where material is reclaimed, reused or recycled as secondary raw materials for new products, while any residual waste that cannot be recycled is used to generate energy (ESA, 2013).

2.3 Employment

There are currently a total of 106,300 people employed in the waste and resource management industry across Great Britain. However, the ESA (2013) estimates that embracing the concept of the circular economy through a £10 billion investment could help generate 50,000 new jobs that will boost UK GDP by £3 billion.

The South East accounts for the highest proportion of waste and resource management employees in England, followed by London (14%) and the South West (14%). This suggests that there is greater demand for waste and resource management services in areas with a high population density.

3. Entry Requirements

3.1 Apply for an Apprenticeship

Apprenticeships are an established route for new people to enter their chosen field of work by easing the sometimes difficult transition between full-time learning and employment. They also provide more experienced staff with the opportunity to develop their existing skills or re-train so that they can enter new industries.

Anyone living in England, over 16 years-old and not in full-time education can undertake an apprenticeship that takes between 1 and 4 years to complete depending on level. A paper by Asset Skills (2011) suggests that individuals looking to apply for an apprenticeship placement in today's competitive market would benefit from having a range of skills and attributes, including:

- Confidence
- Interview skills
- Communication skills
- Problem solving skills
- Independent and team working skills
- Basic literacy, numeracy and IT skills

3.2 Progression route

Apprenticeships can lead to:

- Permanent employment
- National Vocational Qualifications (NVQs) at Level 2,3,4 or 5
- Functional Skills qualifications, e.g. in maths, English or ICT
- a technical certificate, such as a BTEC or City & Guilds Progression Award
- knowledge-based qualifications, such as a Higher National Certificate (HNC), a Higher National Diploma (HND) or a Foundation degree

4. Level 2 Apprenticeship in Sustainable Resource Management

4.1 Who is it for?

This apprenticeship programme has been designed for people working in the following occupations roles:

- Manual/mechanical street cleanser
- Transfer station technician
- Compost technician (biological treatment)
- Materials recycling facility technician (picker/sorter)
- Household waste recycling centre technician
- Recycling technician (driver/loader)
- Refuse technician (driver/loader)
- Environmental technician (including weighbridge and other activities)

4.2 What does it cover and how will I learn?

This apprenticeship programme is designed to provide individuals with the knowledge and skills required to effectively undertake their role in the waste and resource management industry effectively.

It covers a wide range of competencies at operative level for waste management sites, including: customer service, health and safety, sustainability, emergency protection, manual collection, processing and transportation of waste, and team work.

The majority of the training is 'on-the-job' at the employer premises working alongside experienced staff, while the remaining training is delivered 'off-the-job' by a specialist training provider – usually on a day or block release basis.



The Five Components of this Apprenticeship

1. Level 2 Sustainable Waste Operative or Recycling Activities mandatory and optional competence units so can demonstrate workplace abilities.
2. Level 2 in Principles of Sustainable Resource Management (technical certificate) to provide extra knowledge about job role.
3. Employment Rights and Responsibilities (ERR).
4. Functional Skills in English and Mathematics *OR* Essential Skills in English and Mathematics.
5. *For English Apprentices Only:* Personal Learning and Thinking Skills (PLTS).

4.3 Apprenticeship Components

4.3.1 Level 2 Sustainable Waste Operative or Recycling Activities mandatory and optional competence units

Qualification	Pathway	QCF Code
Level 2 Certificate for Sustainable Waste Management Operative	General	501/1476/1
Level 2 Certificate for Sustainable Waste Management Operative	Waste Collection	501/1855/9
Level 2 Certificate for Sustainable Waste Management Operative	Waste Collection Driver	501/1475/X
Level 2 Certificate in Front Line Environmental Services	-	600/0025/9
Level 2 Diploma for Sustainable Waste Management Operative	Waste Site Operative	501/1478/5
Level 2 Diploma for Sustainable Waste Management Operative	Weighbridge Operative	501/1477/3
Level 2 Diploma for Sustainable Recycling Activities	Multiple pathways	501/2182/0

4.3.2 Level 2 in Principles of Sustainable Resource Management (technical certificate)

Mandatory

- How to work safely within the waste/recycling industry
- Understand environmental protection within the waste/recycling industry
- How to identify and resolve disagreements
- Understand the principles of the waste/recycling industry
- Understand the principles of identifying and classifying waste
- Understand the 'Duty of Care' within the waste/recycling industry
- Employment Rights & Responsibilities

Optional Units for Apprentices (Level 2)

- Understand the reasons and targets for recycling
- Manual Street Cleaning
- Mechanical Street Cleaning
- Understand operational systems and procedures within the waste/recycling industry
- Know the materials arising within the waste/recycling industry
- Know how to maintain confidentiality of information within the waste/recycling industry

4.3.3 Employment Rights and Responsibilities

- Know employer and employee rights, responsibilities and own organisational procedures
- Know factors that affect own organisation and occupation

4.3.4 Functional Skills (English Apprentices) or Essential Skills Wales

- English and Mathematics at Level 1

4.3.5 Personal Learning and Thinking Skills

- Team Working
- Reflective Learning
- Creative Thinking
- Independent Enquiry
- Self Management
- Effective Management

4.4 Common Job Roles for an Apprentice at Level 2

Competence Qualification	Example Occupational Role	Description
Certificate for Sustainable Waste Management Operative (Waste Collection Driver)	Waste Collection Driver	Driving the refuse collection vehicle and loading and unloading material
Certificate for Sustainable Waste Management Operative (Waste Collection)	Refuse Operative/Waste Collection Loader	Loading and unloading of waste as part of a collection team. Manual handling usually plays a significant part
Diploma for Sustainable Waste Management Operative (Weighbridge Operative)	Weighbridge Operative	Operation of the weighbridge and the associated administrative duties
Diploma for Sustainable Waste Management Operative (Waste Site Operative)	Transfer Station Operative	Involves both manual and mechanical handling of waste and transfers to containers for processing. May involve some sorting and re-processing
	Compost Operative	Involves both manual and mechanical handling of green waste and transfers to containers for processing. May involve some sorting and re-processing
	Materials Recycling Facility (MRF) Operative (Picker/Sorter)	This is normally a manual occupation and involves the abstraction of selected material from mixed waste and recyclables
	Household Waste Recycling Centre Operative	Maintains HWRC (civic amenity sites) in an orderly and tidy state. Will assist manually and/or mechanically in the loading and offloading of materials and containers. Involves directing the general public on the best practice for sorting waste and recyclables
Diploma for Sustainable Recycling Activities (Collection)	Recyclables Collection Loader	Loading and unloading of recyclables as part of a collection team. Manual handling plays a significant part
Diploma for Sustainable Recycling Activities (Reception & Segregation)	Recycling Operative (Reception & Segregation)	Kerbside collection and segregation of recyclables. Involves contact with the public and providing advice on recycling activities
Diploma for Sustainable Recycling Activities (Processing)	Recycling Operative (Processing)	This is normally a manual occupation and involves the abstraction of material from mixed waste and recyclables
Diploma for Sustainable Recycling Activities (WEEE)	Recycling Operative (WEEE)	Collection, sorting and segregation of WEEE. Responsible for routine operations that may involve a number of tasks i.e. sorting, disassembly, cleaning, component retrieval.

5. Level 3 Apprenticeship in Sustainable Resource Management

5.1 Who is it for?

This apprenticeship programme has been designed for people working in the following occupations roles:

- Sustainability Officer
- Refuse Collection Supervisor (Team Leader)
- Recycling Collection Supervisor (Team Leader)
- Treatment (Physical/Chemical or Thermal) Supervisor
- Materials Recycling Facility/Household Waste Recycling Centre Supervisor
- Transfer Station Supervisor
- Biological Treatment (In-vessel Composting/Open Windrow/ Anaerobic Digestion) Supervisor
- Landfill Supervisor

5.2 What does it cover and how will I learn?

This apprenticeship programme is designed to provide individuals with the knowledge and skills required to effectively undertake their role in the waste and resource management industry effectively.

It covers a wide range of competencies at team leader/supervisor level for waste management sites, including: health and safety, sustainability, emergency protection, risk assessment, setting objectives, planning and monitoring the work of teams, and developing personal performance.

The majority of the training is 'on-the-job' at the employer premises working alongside experienced staff, while the remaining training is delivered 'off-the-job' by a specialist training provider – usually on a day or block release basis.



The Five Components of this Apprenticeship

1. Level 3 Waste Supervisor or Sustainable Recycling Activities (supervisor) mandatory and optional competence units.
2. Level 3 in Principles of Sustainable Resource Management (technical certificate) to provide extra knowledge about job role.
3. Employment Rights and Responsibilities (ERR).
4. Functional Skills in English and Mathematics *OR* Essential Skills in English and Mathematics.
5. *For English Apprentices Only:* Personal Learning and Thinking Skills (PLTS).

5.3 Apprenticeship Components

5.3.1 Level 3 Waste Supervisor or Sustainable Recycling Activities (supervisor) mandatory and optional competence units.

Qualification	Pathway	QCF Code
Level 3 Diploma for Waste Supervisor	-	501/1853/5
Level 3 Diploma for Sustainable Recycling Activities	Supervisory	501/2185/6

5.3.2 Level 3 in Principles of Sustainable Resource Management (technical certificate)

Mandatory

- How to work safely within the waste/recycling industry
- Understand environmental protection within the waste/recycling industry
- How to identify and resolve disagreements
- Understand the principles of the waste/recycling industry
- Understand the principles of identifying and classifying waste
- Understand the 'Duty of Care' within the waste/recycling industry
- Employment Rights & Responsibilities
- Plan, allocate and monitor the work of a team

Optional Units for Advanced Apprentices (Level 3)

- Understand policy and legislation in the waste management industry
- Understand the requirements for transportation of waste
- Understand management systems
- Know about waste treatment technologies
- Technical aspects of managing waste and resources
- Understand planning requirements in the waste/recycling industry
- How to identify and record Hazardous waste
- Understand environmental permitting

5.3.3 Employment Rights and Responsibilities

- Know employer and employee rights, responsibilities and own organisational procedures
- Know factors that affect own organisation and occupation

5.3.4 Functional Skills (English Apprentices) or Essential Skills Wales

- Key Skills in communication and application of number at level 2
- English and Mathematics at Level 2

5.3.5 Personal Learning and Thinking Skills

- Team Working
- Reflective Learning
- Creative Thinking
- Independent Enquiry
- Self Management
- Effective Management

5.4 Common Job Roles for an Apprentice at Level 3

Competence Qualification	Example Occupational Role	Description
Diploma for Sustainable Recycling Activities (Supervisory)	Recycling Collection Supervisor (Team Leader)	Responsible for over-seeing the work of one or more teams on recycling collection operations. Motivating staff and maintaining high standards are key to this role
Diploma for Waste Supervisor	Refuse Collection Supervisor (Team Leader)	Responsible for over-seeing the work of one or more teams on refuse collection operations. Motivating staff and maintaining high standards are key to this role
	Transfer Station Supervisor	Responsible for day-to-day supervision of operations at a transfer station, including maintaining compliance with health, safety and environmental standards. Supervising work teams central to the role
	Treatment (Physical/Chemical/Thermal) Supervisor	Responsible for over-seeing the work of one or more teams on treatment plant operations. Motivating staff and maintaining high standards are key to this role
	Biological Treatment (In-vessel Composting/Open Windrow/Anaerobic Digestion Supervisor)	Responsible for over-seeing the work of one or more teams on biological treatment operations. Motivating staff and maintaining high standards are key to this role. This role includes a range of technical support operations
	Materials Recycling Facility (MRF)/ Household Waste Recycling Centre (HWRC) Supervisor	Responsible for over-seeing the work of one or more teams on a MRF/HWRC Site. Motivating staff and maintaining high standards are key to this role. Another key feature of this role is to ensure efficient plant operations
	Landfill Supervisor	Responsible for day-to-day supervision of operations at a Landfill. Motivating staff and maintaining high standards are key to this role. Another key feature of this role is interfacing with customers, regulators, local residents and other interested parties
	Sustainability Officer	Considering all aspects of environmental management in an organisation, including management systems, sustainable procurement, looking at waste minimisation – best ways to treat waste and recyclables following waste hierarchy and other principles

6. Level 4 Higher Apprenticeship in Sustainable Resource Operations and Management

6.1 Who is it for?

This apprenticeship programme has been designed for people working in the following occupations roles:

- Fleet manager
- Reuse manager
- Refuse collection manager
- Transfer station manager
- Household waste recycling centre (HWRC) manager
- Landfill manager
- Sustainability manager

6.2 What does it cover and how will I learn?

This qualification is designed to provide individuals working in management roles on waste sites with the skills to operate their site effectively.

Achievement of this qualification demonstrates competence by the learner to manage the resource management business effectively, ensuring that customers receive a reliable service delivered to a high standard.

It covers a wide range of competencies designed to ensure that individuals have the knowledge and skills to manage an operational area, maintain health and safety, allocate work and maintain the quality of treatment processes.

The majority of the training is 'on-the-job' at the employer premises working alongside experienced staff, while the remaining training is delivered 'off-the-job' by a specialist training provider – usually on a day or block release basis.

The Components of this Apprenticeship

1. Level 4 Diploma in Systems and Operations Management

OR

Level 4 Diploma in Systems and Operations Management (Small Scale Operations)

Please Note: In Wales, there is also a requirement for *Employee Rights and Responsibilities, and Essential Skills*.



6.3 Apprenticeship Components

6.3.1 Level 4 Diploma in Systems and Operations Management

Mandatory Units

Candidates must complete all units in this group.

- Conduct a health and safety risk assessment of the workplace – HSS6
- Manage and Plan an Operational Area within an Organisation – RA3.3.4a
- Plan, allocate and monitor work in own area of responsibility – MSCD6
- Work productively with colleagues and stakeholders – MSCD2b
- Support learning and development within own area of responsibility – MSCD7
- Ensure responsibility for actions to reduce risks to health and safety – HSS1
- Maintain protection of the environment in facilities used for the processing or storage of recyclables and other materials – RA3429
- Monitor and maintain the quality of treatment processes in an energy and utilities environment – WM86
- Manage physical resources – MSCE8
- Procedural compliance – WM23
- Provide leadership in your area of responsibility – WS05

Option Group B

Candidates must choose one unit from this group.

- Identify and implement improvements to recycling activities – RA3.4.21
- Manage improvements to waste management operations – WM9

Option Group C

Candidates must choose one unit from this group.

- Manage the transfer of outputs and disposal of residues from waste treatment and recovery operations in the waste industry – WM87
- Manage the transfer of outputs and disposal of residues from biological treatment operations – WM21

Option Group D

Candidates must choose one unit from this group.

- Manage a budget for own area or activity of work – MSCE1
- Managing finance in an energy and utilities environment – WM90

Option Group E

Candidates must choose one unit from this group.

- Manage and maintain effective systems for responding to emergencies – WM24
- Manage systems for responding to emergencies during recycling activities – RA3420
- Manage assets and the maintenance strategy in an energy and utilities environment – WM88
- Control maintenance and other engineering operations for recycling activities – RA3424
- Award contracts for the supply of recycling activities – RA3427

- Prepare for and facilitate an inspection visit at your organisation from regulatory bodies in an energy and utilities environment – WM89
- Generate and retain waste and resource management business – WM10
- Recruit people for your business – OP3
- Manage site biosecurity and personal hygiene – WM91

6.3.2 Level 4 Diploma in Systems and Operations Management (small scale operations)

Mandatory Units

Candidates must complete all units in this group.

- Conduct a health and safety risk assessment of the workplace – HSS6
- Work productively with colleagues and stakeholders – MSCD2
- Support learning and development within own area of responsibility – MSCD7
- Ensure responsibility for actions to reduce risks to health and safety – HSS1W
- Maintain protection of the environment in facilities used for the processing or storage of recyclables and other materials – RA3429
- Monitor and maintain the quality of treatment processes in an energy and utilities environment – WM86
- Manage physical resources – MSCE8
- Procedural compliance – WM23
- Provide leadership in your area of responsibility – WS05
- Recruit people for your business – OP3
- Getting the best out of staff in a business – UR86

Option Group B

Candidates must choose one unit from this group.

- Identify and implement improvements to recycling activities – RA3.4.21
- Manage improvements to waste management operations – WM9

Option Group C

Candidates must choose one unit from this group.

- Manage the transfer of outputs and disposal of residues from waste treatment and recovery operations in the waste industry – WM87
- Manage the transfer of outputs and disposal of residues from biological treatment operations – WM21

Option Group D

Candidates must choose one unit from this group.

- Manage a budget for own area or activity of work – MSCE1
- Managing finance in an energy and utilities environment – WM90

Option Group E

Candidates must choose one unit from this group.

- Manage and maintain effective systems for responding to emergencies – WM24
- Manage systems for responding to emergencies during recycling activities – RA3420
- Manage assets and the maintenance strategy in an energy and utilities environment – WM88
- Control maintenance and other engineering operations for recycling activities – RA3424
- Award contracts for the supply of recycling activities – RA3427
- Prepare for and facilitate an inspection visit at your organisation from regulatory bodies in an energy and utilities environment – WM89

- Generate and retain waste and resource management business – WM10
- Recruit people for your business – OP3
- Manage site biosecurity and personal hygiene – WM91

6.4 Common Job Roles for an Apprentice at Level 4

Competence Qualification	Example Occupational Role	Description
Level 4 Diploma in Systems and Operations Management OR Level 4 Diploma in Systems and Operations Management (Small Scale Operations)	Fleet manager	Managing the fleet of collection vehicles. Responsible for procurement activities such as maintenance service contracts, asset management, process optimisation, finance and aspects of leadership.
	Reuse manager	Managing reuse operations including collections, storage, sorting and sales activities. Responsible for procurement activities such as maintenance service contracts, consumable materials, equipment and recyclable waste, asset management, process optimisation, finance and aspects of leadership.
	Refuse collection manager	Management of refuse collection operations - Responsible for procurement activities i.e. maintenance service contracts, equipment and recyclable waste, asset management, process optimisation, finance and aspects of leadership. Managing and motivating staff and maintaining high standards are key.
	Transfer station manager	Management of all operations at a transfer station including maintaining compliance with health and safety and environmental standards. Responsible for procurement activities i.e. maintenance service contracts, consumable materials, equipment, asset management, process optimisation.
	Household waste recycling centre (HWRC) manager	Management of all operations on a HWRC site. Responsible for procurement activities such as maintenance service contracts, consumable materials, equipment and recyclable waste, asset management, process optimisation, finance and aspects of leadership.
	Landfill manager	Management of all operations on a landfill site. Responsible for procurement activities such as maintenance service contracts, process optimisation and aspects of leadership. A key feature of this job is interfacing with customers, regulators, local residents and other interested parties.
	Sustainability manager	Management of all aspects of environmental management in an organisation, including management systems, sustainable procurement, looking at waste minimisation and the best ways to treat waste and recyclables following the waste hierarchy and other principles.



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