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Llywodraeth Cymru
Welsh Government

1102 Welsh Apprenticeship Pathway

in

Sustainable Resource Management

The content of this Pathway has been agreed by Energy and Utility Skills. This is the only Apprenticeship Pathway in the Energy sector approved for use in Wales that is eligible for Welsh Government funding.

More Information can be obtained from:

FEAD DfES • Ty Afon
Bedwas Rd • Bedwas
Cf838WT

DfES-ApprenticeshipUnit@gov.wales
Gwefan • website: www.llyw.cymru
www.gov.wales

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LEARNING PROGRAMME CONTENT

The Learning Programme provision shall comprise of three mandatory elements:

- Qualifications
- Essential Skills
- On/off the job training

The total minimum credit value required for the Level 3 Pathway Sustainable Resource Management is 54 credits (was 90 credits).

The total minimum credit value required for the Level 4 Pathway Sustainable Resource Operations and Management is 56 credits (was 111 credits).

ENTRY REQUIREMENTS

The Apprenticeship in Sustainable Resource Management is open to individuals of any age and does not impose any restrictions to entry.

Responsibility for selection and recruitment of apprentices lies with the employer who will have a clear idea of their requirements.

The waste management industry is potentially very dangerous so the safety of apprentices, their work colleagues and the public are of the upmost importance in this job.

Apprentices must be prepared to wear Personal Protective Equipment (PPE) when required. These may be physically demanding jobs that involve bending, lifting and manual handling, so a basic level of fitness is important to be able to conduct the job efficiently.

Many of these jobs involve work outdoors, so apprentices should be prepared to work in any kind of weather.

Some job roles will require shift work to ensure plant and equipment is operational 24 hours a day.

APPRENTICESHIP PATHWAY LEARNING PROGRAMME(S)

Level 3: Sustainable Resource Management

Qualifications

Participants must achieve one of the following competence and knowledge qualifications below

C1 Level 3 Diploma for Sustainable Recycling Activities (Supervisory)					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
WAMITAB	C00/0291/3	10	104	Competence	English Only

C2 Level 3 Diploma for Waste Supervisor					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
WAMITAB	C00/0237/7	17	176	Competence	English Only

K1 Level 3 Certificate in Principles of Sustainable Resource Management					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
City & Guilds	C00/0301/1	32	320	Knowledge	English Only
WAMITAB	C00/0236/9	14	145	Knowledge	English Only

Essential Skills Wales (ESW)

Essential Skills Wales qualifications assessment languages are English-Welsh

Level 3: Sustainable Resource Management	Level	Minimum Credit Value
Communication	2	6
Application of Number	2	6
Digital Literacy	1	6

On/Off the Job Training

Pathway	Minimum On the Job Training Hours	Minimum Off the Job Training Hours
Level 3: Sustainable Resource Management	119	350

On/Off the Job Qualification details (Minimum Credit & Hours)

The total minimum amount of training hours - which includes both on and off-the-job learning for this Pathway is 469 training hours.

On the job training

The minimum on-the-job training time is 119 hours made up as follows:

Minimum 104 hours – Competence qualification.

This is based on the qualification rules of combination but hours could vary from learner to learner, depending on the optional units chosen;

Minimum 15 hours - Dedicated time spent with employer/ mentor to enhance the apprentice's training; including induction.

Off the job training

The minimum amount of off-the-job training is 350 hours.

Minimum 320 hours - Knowledge qualification. This is based on the qualification rules of combination but hours could vary from learner to learner, depending on the optional units chosen;

- 15 hours – Induction, including relevant coverage of employment rights;

- 15 hours - Mentoring, reviews, pastoral care.

The industry would expect the Apprenticeship to take 30 months to complete.

On/Off the Job Essential Skills details (Minimum Credit & Hours)

- 6 credits / 45 GLH Level 2 Essential Skills Wales Communication
- 6 credits / 45 GLH Level 2 Essential Skills Wales Application of Number
- 6 credits / 45 GLH Level 1 Essential Skills Wales Digital Literacy

Level 4: Sustainable Resource Operations and Management

Qualifications

Participants must achieve one of the following combined qualifications below

B1 Level 4 Diploma in Systems and Operations Management					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
WAMITAB	C00/0533/8	48 (	484	Combined	English Only

B2 WAMITAB Level 4 Diploma in Systems and Operations Management: Small Scale Operations					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
WAMITAB	C00/0533/7	44	445	Combined	English Only

Please see [Annex 1](#) for the relationship between the competence and knowledge units within the combined qualification.

Essential Skills Wales (ESW)

Essential Skills Wales qualifications assessment languages are English-Welsh

Level 4: Sustainable Resource Operations and Management	Level	Minimum Credit Value
Communication	2	6
Application of Number	2	6
Digital Literacy	1	1

On/Off the Job Training

Pathway	Minimum On the Job Training Hours	Minimum Off the Job Training Hours
Level 4: Sustainable Resource Operations and Management	194	296

On/Off the Job Qualification details (Minimum Credit & Hours)

The total amount of training hours - which includes both on and off-the-job learning for this Pathway is 490 training hours.

On the job training

The minimum on-the-job training time is 194 hours made up as follows:

Minimum 179 hours – Competence element of the combined qualification.

This is based on the qualification rules of combination but hours could vary from learner to learner, depending on the optional units chosen;

Minimum 15 hours - Dedicated time spent with employer/ mentor to enhance the apprentice's training; including induction.

Off the job training

The minimum amount of off-the-job training is 296 hours.

Minimum 266 hours - Knowledge element of the combined qualification. This is based on the qualification rules of combination but hours could vary from learner to learner, depending on the optional units chosen;

- 15 hours – Induction, including relevant coverage of employment rights;

- 15 hours - Mentoring, reviews, pastoral care.

The Industry would expect the Apprenticeship to take 36 months to complete.

On/Off the Job Essential Skills details (Minimum Credit & Hours)

- 6 credits / 45 GLH Level 2 Essential Skills Wales Communication
- 6 credits / 45 GLH Level 2 Essential Skills Wales Application of Number
- 6 credits / 45 GLH Level 1 Essential Skills Wales Digital Literacy

OTHER ADDITIONAL REQUIREMENTS

Achievement of the Environmental Permitting Operator's Certificate (EPOC) has been proposed.

JOB ROLES

The latest version of the job roles and job descriptions for this Pathway can be found [here](#)

Level 3 Job Roles

Reuse Supervisor - Supervising reuse operations including collections, storing, sorting and sales activities.

Recycling/Refuse Collection Supervisor (Team Leader) - Responsible for over-seeing the work of one or more teams on recycling/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 and safety and environmental standards. Supervising work teams is central to the role.

Treatment (Physical/ Chemical/ Thermal) Supervisor - Responsible for overseeing 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 overseeing 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 overseeing the work of one or more teams on a MRF/HWRC site. Motivating staff and maintaining high standards are key to this role. One of the key features of this role is to ensure efficient and effective plant operation.

Landfill Supervisor - Responsible for overseeing day to day operations on a landfill site. Motivating staff and maintaining high standards are key to this role. A key feature of this job is interfacing with customers, regulators, local residents and other interested parties.

Sustainability Officer -This role involves considering 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.

Level 4 Job Roles

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.

Contract Manager - Managing 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.

Collections Manager - Management of 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.

PROGRESSION

Level 3: Sustainable Resource Management

Progression routes into the pathway:

Applicants may come from a range of routes including:

- School/college leaver
- Apprenticeship in Sustainable Resource Management at Level 2
- Work or work experience
- Training and/or experience which could include a portfolio showing what they have done
- Academic qualification(s) such as the Welsh Baccalaureate
- Achievement of Essential Skills Wales
- Successful completion of a Young Apprenticeship
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Progression routes out of the pathway:

On completion of the apprenticeship and under normal circumstances, apprentices may continue to work as a competent operative in their current job role.

Progression will depend on the performance and motivation of the individual and the vacancies / opportunities available within the company. It is possible for supervisors to move across to other industry areas or to become the managers of the future. For these individuals, opportunities to achieve further qualifications, which might include a level 4 competence based qualification, will be available.

Apprentices could progress to complete the following qualifications:

- Institute of Leadership and Management (ILM) Certificate in First Line Management
- Higher National Certificate (HNC) in Wastes Management
- Foundation Degree (FdSc) in Environmental Management

Level 4: Sustainable Resource Operations and Management

Progression routes into the industry:

Applicants may come from a range of routes including:

- Successful completion of the Level 3 Apprenticeship in Sustainable Resource Management
- Level 3 competence or knowledge qualifications
- Relevant work or work experience
- Academic qualifications such as GCSEs or A levels or higher level qualification
- Candidates currently employed in the industry but seeking a career change or up-skilling.

Progression routes out of the pathway:

On completion of the apprenticeship, apprentices will continue to work as a competent a manager in their current job role.

Completion of the apprenticeship supports progression to higher level job roles such as Area/Regional Operations Manager, Business Manager, or Facilities Commissioning/Decommissioning Manager.

It is possible for managers to move across to other industry areas or to achieve further qualifications which might include one of the following qualifications recognised by the Chartered Institute of Wastes Management.

- BSc Environmental Science (Wastes)
- FdSc Waste Management
- HNC in Wastes Management
- Professional Diploma in Waste Management
- Certificate in Food Industry Waste and Resource Solutions
- Certificate in Waste and Resource Optimisation in Food Processing
- MSc Waste and Resource Management
- MSc Environmental Management (Waste, Energy, Water, Oil and Gas)
- MSc Waste and Clean Technologies
- PGCert in Energy & Fuels from Waste

For full details of qualifications supported or accredited by CIWM please refer to <https://ciwmquals.co.uk/>

EQUALITY & DIVERSITY

It is important that apprenticeship Pathways are inclusive and can demonstrate an active approach to identifying and removing barriers to entry and progression. Pathways should advance equality of opportunity between persons who share protected characteristics and those persons who do not as identified in the Equality Act 2010.

The Protected characteristics identified in the Equality Act are age, disability, gender re-assignment, race, religion or belief, sex, sexual orientation, pregnancy and maternity. Marriage and civil partnership is also included although only in respect of the requirement to eliminate discrimination in employment.

Training providers and employers must also comply with the other duty under the Equality Act 2010 to ensure that applicants are not discriminated against in terms of entry to the industry based upon those nine protected characteristics.

Under-representation

The waste management industry is affected by a gender imbalance with females constituting only 15.8% of the workforce compared to the 47% UK average. In addition, only 6.9% of the waste management industry workforce is Black, Asian and Minority Ethnic compared to 11.4% of the UK workforce.

Solutions to entry and progression

Energy & Utility Skills routinely analyses national data on the scale and nature of the workforces in the power, gas, water, and waste management industries. The Workforce Renewal and Sector Skills Strategy 2020 – 2025 includes planned action on the broad issues of sector attraction and inclusion and diversity. The Energy & Utility Skills Sector Inclusion Commitment is a public statement of action from the sector's major employers.

The energy and utilities sector has a long history of offering high quality technical apprenticeships that can lead to lifelong careers in critical national industries.

The ongoing reviews of apprenticeship frameworks bring to light potential issues that may be barriers to access. One of the key strengths of apprenticeships is that they are employed positions. This provides the opportunity for sector employers to bring their awareness and actions on entry and progression to their recruitment and development strategies. A number of sector employers have specific strategies to target under-represented groups, and also undertake work in their communities and in education settings to promote sector careers using examples of successful employees who backgrounds that have been historically under-represented.

Energy & Utilities Jobs

The energy and utilities sector is committed to recruiting from the diverse communities they serve. The sector sponsor Energy & Utilities Jobs which advertises all vacancies including apprenticeships, across the UK. There is a focus on reaching underrepresented groups including females, people with disabilities, and people from a black, Asian or ethnic minority background, so that opportunities are more visible to everyone. Many employers work in partnership with organisations which support minority groups in their workplace. Apprenticeship opportunities are open to everyone.

Inclusion Commitment

CEOs from the sector's leading businesses have committed to proactively changing diversity statistics and promoting their businesses to under-represented talent through the Sector's Inclusion Commitment. They are committed to working across all sectors to recruit and attract a workforce that mirrors and speaks to the communities they serve.

They will highlight the great work already being done by the sector as well as continuing to drive change through a commitment to inclusive attraction, recruitment, and development of its workforce.

In 2020 the sector introduced an inclusion measurement framework to which 24 organisations submitted data. From the inaugural results, the sector has focused on the attraction and recruitment of diverse new entrants. The 2021 results demonstrate increases in female and Black, Asian and ethnic minority entrants to the sector and now incorporates wider measures across the employment lifecycle and protected characteristics.

Key recent actions:

- Changes to apprenticeship entrance requirements, recruiting based on attributes rather than qualifications
- Number of sector employers enrolled in 10,000 Black Interns, providing internships for Black students
- Black Asian and minority ethnic candidates make up over 20% of the Energy & Utility Jobs talent pool (as a result of targeted campaigns)
- Sector partnership with Tomorrow's Engineers Code (part of Engineering UK) to ensure the sector's school outreach includes students from a wide range of backgrounds
- Increasing numbers of Disability Confident employers across the sector, working with a wide range of partners including Remploy, Shaw Trust and ENEI
- Sector participation in the refresh of the Masculinity in Engineering research (Equal Engineers) exploring the links between mental health, health and safety and inclusion.

EMPLOYMENT RESPONSIBILITIES AND RIGHTS (ERR)

Employment Responsibilities and Rights (ERR) is no longer compulsory. But it is recommended that all apprentices (especially the 16 years -18-year group) receive a company induction programme. There will be a Workbook available for ERR from E & U Skills.

RESPONSIBILITIES

It is the responsibility of the Training Provider and Employer to ensure that the requirements of this pathway are delivered in accordance with the Welsh Government Apprenticeships Guidance.

Further information may be obtained from:

Welsh Government
DfES-ApprenticeshipUnit@gov.wales

Annex 1

Level 4: Sustainable Resource Operations and Management

Relationship between competence and knowledge qualifications

Apprentices must complete either qualification B1 or B2.

The chosen qualification must reflect the apprentices job role and the facility where they work. The qualifications underpin all job roles described in the job role section, however the appropriate choice depends on the size of the facility where the apprentice works.

Qualification B1 is designed for learners working at larger scales facilities who have more specialised functional job roles related to management of operations.

Qualification B2 is designed for learners working at smaller scale facilities who, whilst managing operations, will have a broader range of responsibilities and will need a more flexible range of knowledge and skills to reflect these this.

For example, in a large scale facility a site manager would typically have budgetary control but a colleague would manage spend and procurement.