

Land-based Engineering (Wales)

IMPORTANT NOTIFICATION FOR ALL APPRENTICESHIP STARTS FROM 14 OCTOBER 2016

Modifications to SASW came into effect on 14 October 2016. These changes relate to the **Essential Skills and Employer Rights and Responsibilities** requirements of a framework and they **ONLY** apply to new Apprenticeship starts on, or after, 14th October. Apprenticeship starts before this date must continue to meet the 2013 SASW requirements for Essential Skills and Employer Rights and Responsibilities.

For more details of the changes and how they will affect new apprenticeship starts, please read the following preface page to the framework document. NB: Please check the "Revising a Framework" section for information on any additional changes that may have been made to this framework.

Latest framework version?

For any previous versions of this framework: www.acwcerts.co.uk/frameworks-library

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Land-based Engineering (Wales)

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Framework information

Information on the Issuing Authority for this framework:

Lantra

The Apprenticeship sector for occupations in environmental and land-based.

Issue number: 4

This framework includes:

Framework ID:

FR05037

Level 2

Level 3

Level 4-7

Date this framework is to be reviewed
by: 31/03/2025

This framework is for use in: Wales

Short description

The Apprenticeship offers an entry route into the industry and provides the skills and knowledge required to support future progression within the industry. The minimum duration for the Foundation Apprenticeship is 24 months and Apprenticeship is 15 months (in addition to 24 months to achieve the Foundation Apprenticeship).

The Diploma in Work-based Land-based Engineering included within the framework has routes which apprentices may select depending on the area of employment; these are reflected in jobs such as: Agricultural Service Engineer, Arboricultural Service Engineer, Sports/Groundcare Service Engineer, Horticultural Service Engineer, Plant Maintenance Service Engineer, Diagnostic Technician, Workshop Supervisor.

Following successful completion of the Apprenticeship, apprentices can progress within Land-based Engineering in Further/Higher Education or through other vocational courses.

Contact information

Proposer of this framework

The land-based engineering industry which includes employers and trade associations such as the British Agricultural and Garden Machinery Association (BAGMA), Institute of Agricultural Engineers (IAgrE), Agriculture Engineering Association (AEA), John Deere, AGCO, CLAAS UK, JCB, CNH, Honda and a number of independent businesses/dealers.

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Revising a framework

Why this framework is being revised

The Foundation Apprenticeship and Apprenticeship have undergone an industry review and have been revised.

Summary of changes made to this framework

There have been amendments to the following: Entry requirements; Qualifications; Essential Skills; On and Off the Job Training; Additional Employment Requirements; Job Roles and Progression.

Qualifications removed

IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations - 600/5109/7

Pearson Level 2 Diploma in Work-based Land-based Engineering Operations - 600/3577/8

IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment (QCF) - 601/0608/6

IMIAL Level 3 Diploma in Work-based Land-based Engineering Operations - 600/5128/0

Pearson Level 3 Diploma in Work-based Land-based Engineering Operations - 600/3550/X

Qualifications added

None

Qualifications that have been extended

None

Purpose of this framework

Summary of the purpose of the framework

Defining Apprenticeships

An Apprenticeship is a job with an accompanying skills development programme under an Apprenticeship Agreement designed by employers in the sector. It allows the apprentice to gain technical knowledge and real practical experience, along with essential skills, required for their immediate job and future career. These are acquired through a mix of learning in the workplace, formal off the job training and the opportunity to practice and embed new skills in a real work context. This broader mix differentiates the Apprenticeship experience from training delivered to meet narrowly focused job needs.

All apprentices commencing their Apprenticeship must have an Apprenticeship Agreement between the employer and the apprentice. This can be used to reinforce the understanding of the requirements of the Apprenticeship.

On completion of the Apprenticeship the apprentice must be able to undertake the full range of duties, in the range of circumstances appropriate to the job, confidently and competently to the standard set by the industry.

The Land-based Engineering Industry

Land-based engineering is a broad and highly specialised industry working with a vast array of machinery. Employees are expected to work on a wide range of specialist vehicles and machines used in agriculture, forestry, horticulture, groundcare and fixed plant. An important role for employees is keeping equipment in good working order through planned maintenance, as well as carrying out any diagnostic and repair work when required.

The land-based engineering industry comprises of the following areas:

- Agricultural machinery - including tractors, harvest, cultivation and crop protection machinery, quad bikes, telescopic handlers
- Groundcare machinery - garden, sports turf and grounds maintenance machinery including ride on, pedestrian and robotic mowers, brush cutters and strimmers
- Forestry/arboriculture machinery - including harvesters, timber processing equipment, chainsaws and chippers
- Fixed machinery - including grain/crop processing and milking equipment
- Power Equipment - including generators, water pumps, snow blowers, power carriers and small industrial engines.

Often when qualified, workers are called upon by businesses to repair machines which may involve them working alone in the field, this requires good knowledge of health and safety legislation and working alone policies, which learners will gain through the Apprenticeship in Land-based Engineering.

According to Lantra research there are around 140 land-based engineering businesses in Wales employing around 900 people. Although many are smaller businesses (80% employ less than 10 people) there is a higher proportion of larger businesses in this sector than other land-based sectors, including large manufacturer dealerships. Several of the businesses operate from multiple sites. There is a fairly even spread of land-based engineering businesses throughout Wales.

The land-based engineering industry is vital as it provides support for the agricultural, horticultural, arboricultural and environmental industries within the land-based and environmental sector which emphasises the need for the workforce to be highly skilled. The technology used within these industries and others is evolving very quickly and therefore it is imperative that qualifications are kept up-to-date, reflect the wide diversity of equipment and machinery used within the land-based and environmental sector and are reflective of industry needs. The Apprenticeship offers businesses the opportunity to ensure that all their staff have the required skills and knowledge to meet the challenges of the 21st century. The research also showed that the industry's workforce has proportionally more people over the age of 40 than under, therefore the Apprenticeship entry and progression opportunities aim to encourage young learners into the land-based engineering industry by offering development opportunities to ensure the future of the skills and knowledge within the industry.

The land-based engineering industry suggests that the skills gaps are in specialist technical knowledge to keep up with the pace of change and customer care. The Apprenticeship has taken this on board with the revised framework including these skills within the Diploma in Work-based Land-based Engineering and other areas of the Apprenticeship.

The land-based engineering industry in Wales values the Apprenticeship as an entry route into the sector. Having said this, numbers of completions are low and have declined recently due to Welsh providers delivering full-time options as an alternative. However, Lantra is working with Welsh providers and employers to establish shared training to encourage the uptake of Apprenticeships in Wales. The framework also contributes to meeting the skills priorities in Wales by:

- Providing flexible access to high quality (Level 2 and Level 3) skills programmes for land-based engineering
- Incorporating skills to improve the levels of general literacy and numeracy in Wales
- Using technical and competence qualifications, to help employers' businesses grow
- Developing apprentices' employability skills, making them more attractive to all employers whatever career they choose.

Providing a career pathway into jobs and training at entry and higher levels and provide the skills that the economy needs to grow. During the development of this Apprenticeship, Lantra involved the Welsh members of the industry and trade associations such as British Agricultural and Garden Machinery Association (BAGMA), Institute of Agricultural Engineers (IAgrE), Agriculture Engineering Association (AEA), John Deere, AGCO, CLAAS UK, JCB, CNH, Honda and a number of independent businesses/dealers. By involving trade associations and independent businesses we ensure that the Apprenticeship frameworks are reflective of the current and future needs of the industry.

This important entry route into the industry has been highlighted by employers, which states the need to prioritise and increase the awareness and uptake of Land-based Engineering Apprenticeships.

The land-based engineering framework at both levels reflect the job roles within the industries and allows apprentices to take units in agricultural, forestry/arboriculture, groundcare or fixed plant and storage depending on the business they are working in. The types of jobs available include:

- Job roles at Level 2 may include: : Agricultural Service Engineer, Arboricultural Service Engineer, Sports/Groundcare Service Engineer, Horticultural Service Engineer, Plant Maintenance Service Engineer.
- Job roles at Level 3 may include: Diagnostic Technician, Workshop Supervisor.

Aims and objectives of this framework (Wales)

The aim of the Land-based Engineering Foundation Apprenticeship and Apprenticeship is to build on the predecessor by including updated qualifications that are flexible and reflective of the skills needs of the industry, attract new entrants into the land-based engineering industry and provide progression opportunities to move towards higher level jobs.

Objectives of the framework are to:

1. Provide an alternative entry route into the land-based sector in Wales
2. Increase the uptake of the Land-based Engineering Foundation Apprenticeship and the Apprenticeship in Wales over the next three years
3. Provide career progression information from entry to higher level jobs.

Entry conditions for this framework

The entry conditions for the framework is the employer's and training provider's confidence in your ability to develop the skills and knowledge required to work within the Land-based Engineering industry. Employers are encouraged to get involved in the recruitment and selection stages, to ensure they get to know the apprentices before their employment.

If you are interested in working in Land-based Engineering, there are many different types of jobs, for example working on a range of vehicles and machines used in farming or specialist vehicles and machines used in horticulture, ground care and sports facilities. By taking an apprenticeship in Land-based Engineering you will be able to work towards one of these jobs.

Duration of the Foundation Apprenticeship and Apprenticeship

During the review of the Land-based Engineering frameworks, it has been agreed with the industry that the minimum duration of the Foundation Apprenticeship is 24 months and the Apprenticeship is 15 months (in addition to the 24 months to gain the Foundation Apprenticeship).

Entry requirements for the Foundation Apprenticeship

There are no specific entry requirements for the Level 2 Foundation Apprenticeship in Land-based Engineering, however, there are qualifications, courses and experience that will help learners understand the sector prior to starting:

- Level 1 Certificate in Land-based Studies
- Level 1 BTEC Award/Certificate in Land-based Studies
- Level 1 Diploma in Work-based Land-based Operations
- GCSEs (English/Maths, minimum D) /A Levels
- Have previously worked in, or are currently working within, the industry
- Essential/Key skills.

Entry to this apprenticeship is subject to the discretion of the Training Provider.

Learners who have completed the Welsh Baccaulaureate may have completed units or short courses which will provide underpinning knowledge towards the Foundation Apprenticeship, this will be assessed during an initial assessment allowing RPL where appropriate.

Progression opportunities onto the Land-based Engineering Foundation Apprenticeship also exist for adult learners who have experience within the land-based engineering industry or who are looking for a career change

Entry requirements for the Apprenticeship

Completion of Level 2 Diploma in Work-based Land-based Engineering Operations.

Considered:

Level 2 Certificate/Extended Certificate/Diploma in Land-based Technology

Level 2 Diploma in Work-based Land-based Engineering

Level 2 NVQ in Land-based Service Engineering

Entry to this apprenticeship is subject to the discretion of the Training Provider.

Learners who have completed the Welsh Baccaulaureate may have completed units or short courses which will provide underpinning knowledge towards the Apprenticeship, this will be assessed during an initial assessment allowing RPL where appropriate.

Progression opportunities onto the Land-based Engineering Apprenticeship also exist for adult learners who have experience within the land-based engineering industry or who are looking for a career change.

RULES TO AVOID REPEATING QUALIFICATIONS

Processes exist to make sure that applicants with prior knowledge, qualifications and experience are not disadvantaged by having to repeat learning. Training providers and awarding organisations will be able to advise on the current rules for accrediting prior learning and recognising prior experience. Refer to the on and off-the-job training section for guidance about prior attainment and achievement.

There are no relaxations or proxies for any qualifications specified in a framework in SASW, however, providers are encouraged to identify additional on-the-job training programmes that customise the learning to the new workplace.

Essential Skills Wales

If applicants already have GCSEs in English, Maths and ICT, they still have to do the Essential Skills Wales at the relevant level.

If applicants have already achieved Essential or Key Skills at the relevant level, prior to commencing the apprenticeship, they will not have to do the relevant Essential Skills, but should be encouraged to progress to a higher ESW level.

It is best practice for Essential Skills Qualifications to be assessed in a vocational context.

Competence qualifications

If applicants already have the Level 2/3 competence qualifications for the Apprenticeship they do not have to repeat this qualification, however, this qualification must have been achieved within five years of applying for the apprenticeship certificate and they will still have to demonstrate competence in the workplace.

Prior experience

Applicants already working in the sector will be able to have their prior experience recognised by the Awarding Organisation and this will count towards the competence and the knowledge qualifications in this framework.

Initial Assessment

Training providers and employers will use initial assessment to ensure that applicants have a fair opportunity to demonstrate their ability and to tailor programmes to meet individual needs, recognising prior qualifications and experience.

Processes exist to make sure that applicants with prior knowledge, qualifications and experience are not disadvantaged by having to repeat learning. Training providers and awarding organisations will be able to advise on the current rules for accrediting prior learning and recognising prior experience.

Level 2

Land-based Engineering

Pathways for the framework at level 2:

Pathway 1: Land-based Engineering

Level 2, Pathway 1: Land-based Engineering

Description of this pathway

Equipment used in agriculture, horticulture, sports and amenity, forestry and fixed plant. A minimum of 127 credits which is made up as follows:

- Combined qualification - 109 credits
- Level 1 Essential Skills in Communication - 6 credits
- Level 1 Essential Skills in Application of Number - 6 credits
- Level 1 Essential Skills in Information Technology - 6 credits

Entry requirements for this pathway in addition to the framework entry requirements

No additional pathway entry requirements

Job title(s)**Job role(s)**

Service Engineer

Service Engineers work on a range of specialist vehicles and machines used in farming, forestry and horticultural businesses. They play an important role in keeping equipment in good working order through planned maintenance, as well as carrying out diagnostic and repair work when required.

Sports/Groundcare Engineer

Sports groundcare Engineers work on a wide range of specialist equipment and machinery used in horticulture, groundcare and sports facilities. They will help keep equipment in good working order through planned maintenance, as well as carrying out any diagnostic and repair work when required.

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1- City & Guilds Level 2 Diploma in Work-based Land-based Engineering Operations (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	501/0302/7	City and Guilds of London Institute	109	660 780	N/A

Relationship between competence and knowledge qualifications

There is one qualification, Level 2 Diploma in Work-based Land-based Engineering Operations, which includes both competence and knowledge.

The competence and knowledge elements will be achieved through completion of the mandatory and optional units listed within the awarding organisation's guidance and must total a minimum of 109 credits. At least 17 credits must be achieved through completion of the knowledge units listed below, which are assessed via independent methods. The remaining units of the Diploma contain both competence and knowledge and have integrated assessment methods.

Knowledge units:

- Monitor and maintain health and safety within land-based engineering (7 credits)
- Land-based engineering operations – Applying mechanical principles (5 credits)
- Land-based engineering operations – Understand how to use, service and maintain tools and equipment (5 credits)

Essential Skills

An apprenticeship framework must specify as a Welsh certificate requirement the expected achievement levels of Essential Skills in Communication and the Application of Number.

Where Essential Skills qualifications are specified in an apprenticeship framework, the apprenticeship framework must specify the acceptance of a recognised proxy qualification for Communication and Application of Number.

It is best practice for Essential Skills Qualifications to be assessed in a vocational context.

Communication

For the current list of acceptable proxy qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASW](#) on the [gov.wales](#) website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACW](#) website.

Does this framework require Communication achievement above the minimum SASW requirement? YES NO

Application of Number

For the current list of acceptable proxy qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASW](#) on the [gov.wales](#) website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACW](#) website.

Does this framework require Communication achievement above the minimum SASW requirement? YES NO

Inclusion of Digital Literacy (ICT)

Digital Literacy (ICT) is an **optional** framework requirement.

Is Digital Literacy a requirement in this framework? **YES** **NO**

Digital Literacy (ICT)

Please note that there are currently no acceptable proxy qualifications for Digital Literacy (ICT).

For the current **minimum** grade/level requirements, please refer to the most recent version of [SASW](#) on the [gov.wales](#) website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACW](#) website.

Does this framework require Digital Literacy (ICT) achievement above the minimum SASW requirement? YES **NO**

Progression routes into and from this pathway

The Level 2 Foundation Apprenticeship in Land-based Engineering is valued by the land-based engineering industry as an entry route into the industry.

Progression onto the Land-based Engineering Foundation Apprenticeship

There are no specific entry requirements to enter the Land-based Engineering Foundation Apprenticeship, however, there are qualifications or experience that will help learners prior to starting:

- Level 1 Certificate in Land-based Studies
- Level 1 BTEC Award/Certificate in Land-based Studies
- Level 1 Diploma in Work-based Land-based Operations
- GCSEs (English/Maths, minimum D) /A Levels
- Have previously worked in, or are currently working within, the industry
- Essential/Key skills.

Learners who have completed the Welsh Baccalaureate may have completed units or short courses which will provide underpinning knowledge towards the Foundation Apprenticeship, this will be assessed during an initial assessment allowing RPL where appropriate.

Progression opportunities within the Land-based Engineering Foundation Apprenticeship also exist for adult learners who have experience within the land-based engineering industry or who are looking for a career change.

Progression from a Level 2 Foundation Apprenticeship

Apprentices successfully completing the Foundation Apprenticeship have opportunities to progress within the industry by progressing to the Apprenticeship in Land-based Engineering or other Further Education courses such as:

- Level 3 Certificate/Subsidiary Diploma/Diploma/Extended Diplomas in Land-based Technology
- Level 3 BTEC Award in Land-based Engineering
- Level 3 Certificate in Land-based Engineering
- Level 3 Diploma in Land-based Engineering
- Level 3 BTEC Diploma/Extended Diploma in Land-based Engineering

Typical jobs apprentices will be able to progress onto on completion of the Foundation Apprenticeship will depend on the qualifications and experience gained during the Foundation

Apprenticeship but could include: Service Engineer in Agriculture, Arboriculture, Sports/Groundcare, Horticulture or Plant Maintenance.

Following the successful completion of the Foundation Apprenticeship, there are many opportunities available which could include specialising within the profession, completing manufacturers or other vocational courses or progressing into Further and/or Higher Education.

Employee rights and responsibilities

Please note that for Apprenticeship starts from 14/10/2016 onwards ERR is no longer a **mandatory** requirement in all frameworks.

However, it may still be included in some frameworks and where it is not explicitly stated that ERR is not a requirement then confirmation of an Apprentice's ERR achievement will still remain a requirement for Apprenticeship certification purposes.

Is ERR a requirement for this framework? **YES** **NO**

Delivery and assessment

Evidence for ERR

Within the Apprenticeship in Land-based Engineering apprentices need to complete the ERR element of this framework. This will be explained to apprentices at the start of their programme during induction. Apprentices will need to complete Lantra's Land-based Engineering ERR workbook which contains a number of tasks with short answer questions covering the nine outcomes listed below, which apprentices can complete at their own pace. The workbook can be found on Lantra's website <https://www.frameworksandnos.lantra.co.uk/err-workbooks>

There are nine national outcomes/standards that all learners must know and/or understand:

1. Knows and understands the range of employer and employee statutory rights and responsibilities under employment law. This should cover the apprentice's rights and responsibilities under the Employment Rights Act 1996, Equality Act 2010 and health and safety legislation, together with the responsibilities and duties of employers
2. Knows and understands the procedures and documentation in their organisation, which recognise and protect their relationship with their employer. Health and safety and equality and diversity training must be an integral part of the apprentice's learning programme
3. Knows and understands the range of sources of information and advice available to them on their employment rights and responsibilities. Details of Access to Work and Additional Learning Support must be included in the programme
4. Understands the role played by their occupation within their organisation and industry
5. Has an informed view of the types of career pathways that are open to them
6. Knows the types of representative bodies and understands their relevance to their skill, trade or occupation, and their main roles and responsibilities

7. Knows where and how to get information and advice on their industry, occupation, training and career
8. Can describe and work within their organisation's principles of conduct and codes of practice
9. Recognises and can form a view on issues of public concern that affect their organisation and industry.

Level 3

Land-based Engineering

Pathways for the framework at level 3:

Pathway 1: Land-based Engineering

Level 3, Pathway 1: Land-based Engineering

Description of this pathway

Equipment used in agriculture, horticulture, sports and amenity forestry and fixed plant.
A minimum of 78 credits which is made up as follows:

Combined qualification - 60 credits

Level 2 Essential Skills in Communication - 6 credits

Level 1 Essential Skills in Application of Number - 6 credits

Level 1 Essential Skills in Information Technology - 6 credits

Entry requirements for this pathway in addition to the framework entry requirements

No additional pathway entry requirements.

Job title(s)	Job role(s)
Demonstrator	A demonstrator must be able to sell, install and use new and existing equipment. They have good machine operational skills and a good understanding of all products. They can be a specialist in one or two products such as green crop, grass or tractors.
Diagnostic Technician	Diagnostic technicians are very skilled and knowledgeable on a range of equipment. It is often necessary to go back into industry to refresh skills and stay up-to-date with the latest technology and equipment from manufacturers
Workshop Supervisor	A workshop supervisor will have a good understanding of products and services including parts. They will support the workshop manager with daily activities and act as deputy in their absence. This role will be to ensure all customer's requirements are met and resolve any issues they may have.

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 - City & Guilds Level 3 Diploma in Work-based Land-based Engineering Operations (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	501/0399/4	City and Guilds of London Institute	60	360 480	N/A

Relationship between competence and knowledge qualifications

There is one qualification, Level 3 Diploma in Work-based Land-based Engineering Operations, which includes both competence and knowledge.

The competence and knowledge elements will be achieved through completion of the mandatory and optional units listed within the awarding organisation's guidance and must total a minimum of 60 credits. At least 19 credits must be achieved through completion of the knowledge units listed below, which are assessed via independent methods. The remaining units of the Diploma contain both competence and knowledge and have integrated assessment methods.

Knowledge units:

- Recognise and reduce risks in the land-based engineering work area (4 credits)
- Land-based engineering operation - use calculations (5 credits)
- Maintain electronic control and monitoring systems on land-based equipment (10 credits).

Essential Skills

An apprenticeship framework must specify as a Welsh certificate requirement the expected achievement levels of Essential Skills in Communication and the Application of Number.

Where Essential Skills qualifications are specified in an apprenticeship framework, the apprenticeship framework must specify the acceptance of a recognised proxy qualification for Communication and Application of Number.

It is best practice for Essential Skills Qualifications to be assessed in a vocational context.

Communication

For the current list of acceptable proxy qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASW](#) on the [gov.wales](#) website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACW](#) website.

Does this framework require Communication achievement above the minimum SASW requirement? YES NO

Application of Number

For the current list of acceptable proxy qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASW](#) on the [gov.wales](#) website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACW](#) website.

Does this framework require Application of Number achievement above the minimum SASW requirement? YES NO

Inclusion of Digital Literacy (ICT)

Digital Literacy (ICT) is an **optional** framework requirement.

Is Digital Literacy a requirement in this framework? **YES** **NO**

Digital Literacy (ICT)

Please note that there are currently no acceptable proxy qualifications for Digital Literacy (ICT).

For the current **minimum** grade/level requirements, please refer to the most recent version of [SASW](#) on the [gov.wales](#) website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACW](#) website.

Does this framework require Digital Literacy (ICT) achievement above the minimum SASW requirement? YES **NO**

Progression routes into and from this pathway

The land-based engineering industry values the Apprenticeship as an entry/progression route into the industry. From the Foundation Apprenticeship there is direct progression onto the Apprenticeship, or progression from another programmes may be considered.

Progression onto the Apprenticeship

Completion of Level 2 Diploma in Work-based Land-based Engineering Operations.

Considered:

Level 2 Certificate/Extended Certificate/Diploma in Land-based Technology
Level 2 Diploma in Work-based Land-based Engineering
Level 2 NVQ in Land-based Service Engineering

Entry to this apprenticeship is subject to the discretion of the Training Provider.

Learners who have completed the Welsh Baccalaureate may have completed units or short courses which will provide underpinning knowledge towards the Apprenticeship, this will be assessed during an initial assessment allowing Recognition of Prior Learning (RPL) where appropriate.

Progression opportunities onto the Land-based Engineering Apprenticeship also exist for adult learners who have experience within the land-based engineering industry or who are looking for a career change.

Progression from the Apprenticeship

Apprentices successfully completing the Apprenticeship have opportunities to progress within the industry by progressing to Higher Education courses such as a HNC/D. Examples of courses available across the UK include:

- Engineering: land-based and construction engineering
- Engineering: machinery dealership management
- Agriculture and mechanisation
- Agricultural technology
- People or financial management
- Business Management.

Apprentices looking to progress in their employment from the Apprenticeship may be able to work towards senior, technical and managerial positions. Progression will be dependent on the qualifications and experience an individual possesses, as achievement alone of the Apprenticeship does not guarantee entry to these opportunities.

Employees Rights and responsibilities

Please note that for Apprenticeship starts from 14/10/2016 onwards ERR is no longer a **mandatory** requirement in all frameworks.

However, it may still be included in some frameworks and where it is not explicitly stated that ERR is not a requirement then confirmation of an Apprentice's ERR achievement will still remain a requirement for Apprenticeship certification purposes.

Is ERR a requirement for this framework? **YES** **NO**

Delivery and assessment

Within the Apprenticeship in Land-based Engineering apprentices need to complete the ERR workbook. Lantra's Land-based Engineering ERR workbook contains a number of tasks with short answer questions covering the nine outcomes listed below, which learners can complete at their own pace. The workbook can be found on Lantra's website <https://www.frameworksandnos.lantra.co.uk/err-workbooks> ;

Apprentices who have undertaken a Foundation Apprenticeship may have already completed the ERR workbook or they may have undertaken an accredited unit and therefore do not have to complete the ERR workbook again.

There are nine national outcomes/standards that all learners must know and/or understand:

1. Knows and understands the range of employer and employee statutory rights and responsibilities under employment law. This should cover the apprentice's rights and responsibilities under the Employment Rights Act 1996, Equality Act 2010 and health and safety legislation, together with the responsibilities and duties of employers
2. Knows and understands the procedures and documentation in their organisation, which recognise and protect their relationship with their employer. Health and safety and equality and diversity training must be an integral part of the apprentice's learning programme
3. Knows and understands the range of sources of information and advice available to them on their employment rights and responsibilities. Details of Access to Work and Additional Learning Support must be included in the programme
4. Understands the role played by their occupation within their organisation and industry

5. Has an informed view of the types of career pathways that are open to them
6. Knows the types of representative bodies and understands their relevance to their skill, trade or occupation, and their main roles and responsibilities
7. Knows where and how to get information and advice on their industry, occupation, training and career
8. Can describe and work within their organisation's principles of conduct and codes of practice
9. Recognises and can form a view on issues of public concern that affect their organisation and industry.

The remaining sections apply to all levels and pathways within this framework.

How equality and diversity will be met

Land-based engineering industry

The land-based engineering industry employees are mainly males (77%), which is significantly higher than the sector average of 68% (UK) male employees and Wales' average at 71%.

Whilst the industry doesn't preclude females from working in the sector, it is suggested that the imbalance is due to an out-dated perception of land-based engineering employment as traditionally a male dominated industry despite many roles in land-based engineering being carried out by females. It is interesting to note that Further Education enrolments onto Land-based Engineering related learning programmes are also mainly male at an average of 98% compared with work-based learning enrolments 100%.

There are a wide range of hands-on roles for people of all ages and abilities together with an increasing need for skilled managerial, high-tech and specialist people.

The industry is diverse and made up of dealerships, manufacturers, the ground care sector, forestry and garden machinery dealerships and manufacturers. There is a wide range of opportunities for land-based engineers, including exciting and rewarding careers in design development, manufacturing, field engineering, service engineering, environmental control, mechanisation and sales and marketing.

Care should be taken by providers and employers that unfair discrimination does not occur.

Apprenticeships are seen as an important route to encourage and facilitate a greater diversity of individuals into the industry. Training providers MUST comply with the Equality Act 2010 to ensure that applicants are not discriminated against in terms of entry to the industry, using the nine legally protected characteristics of:

1. Age
2. Disability
3. Gender
4. Gender reassignment
5. Marriage and civil partnerships
6. Pregnancy and maternity
7. Race
8. Religion and Belief
9. Sexual orientation

Resolutions and further work

The units within the Diploma in Work-based Land-based Engineering have been written in collaboration with partner awarding organisations to ensure that they are free from bias, accessible to all apprentices and are applicable to a wide range of roles and businesses within land-based engineering. Because of the diverse nature of the land-based engineering sector the Diploma in Work-based Land-based Engineering has been developed from these units to allow maximum flexibility and choice within the rules of combination.

Lantra will work with the Land-based Engineering Industry to promote the need for skilled managerial, high-tech and specialist people. This will also take into account the need to increase female and ethnic participation in the industry. Activities will include:

- Increasing the awareness of the Land-based Engineering Apprenticeship with specific promotions, in particular focusing on under-represented groups such as females Increasing marketing and communications highlighting the opportunities to a wide range of careers within and related to the sector
- Using Lantra's careers web pages to inform careers advisors and apprentices of the opportunities available in the industry.

On and off the job training

Summary of on- and off-the-job training

Legal Requirement

An apprenticeship framework must specify that on-and off-the-job training must either have been received:

Whilst working under an apprenticeship agreement; or

During a qualifying period ending on the date of application for an apprenticeship certificate.

A qualifying period of five years is recommended, if it was undertaken in relation to an accredited qualification contained in the framework for which an apprenticeship certificate is to be applied for.

Definition:

Off-the-job learning is characterised by formal or planned taught sessions delivered predominantly by qualified training staff.

On-the-job learning hours are those which enable the apprentice to demonstrate physical job-related skills and to practice and apply these in the context of the job. This type of learning will be delivered in the workplace.

Total learning hours

Foundation Apprenticeship (level 2)

- The total amount of learning hours for apprentices completing the Level 2 Foundation Apprenticeship in Land-based Engineering, which includes both on and off the job training is 3230 hours over a 24 month period.

Apprenticeship (Level 3)

The total amount of learning hours for apprentices completing the Level 3 Apprenticeship in Land-based Engineering, which includes both on and off the job training, is 2019 hours over a 15 month period.

Off-the-job training

Off-the-job training

For this framework the amount of off-the-job training is as follows:

Foundation Apprenticeship

– It is recommended that this follows the current accepted ratio of 20%. This will be 323 hours per year off the job training, including mandatory attendance at an off the job training establishment or college during the training period.

Apprenticeship

– It is recommended that this follows the current accepted ratio of 20%. This will be 323 hours per year off the job training, including mandatory attendance at an off the job training establishment or college during the training period.

How this requirement will be met

Training hours delivered under an Apprenticeship agreement may vary depending on the previous experience and attainment of the apprentice.

The amount of off-the-job training required to complete the Apprenticeship under the Apprenticeship agreement may then be reduced accordingly, provided the total number of off-the-job hours for this framework can be verified for Apprenticeship certification.

Previous attainment

Where a learner enters an Apprenticeship agreement having previously attained parts or all of the relevant qualifications, this prior learning needs to be recognised using either the Credit and Qualifications Framework for Wales (CQFW) credit transfer for achievements within the CQFW, or through recording of exemptions for certificated learning outside of the CQFW, for example Principal Learning Qualifications.

For learners who have already achieved the relevant qualifications, they must have been certificated within five years of applying for the Apprenticeship Certificate.

Previous experience

Where a learner enters an Apprenticeship agreement with previous work-related experience, this prior learning needs to be recognised (see CQFW guidance on claiming credit for further details). To count towards Apprenticeship certification, previous experience must be recorded using the appropriate awarding organisation's Recognition of Prior Learning procedures and the hours recorded may then count towards the off-the-job hours required to complete the Apprenticeship.

For learners with prior uncertificated learning experience, the off-the-job learning must have been acquired within five years of application for the Apprenticeship Certificate or have been continuously employed in the relevant job role in the industry for five years.

Off-the-job training needs to:

- Be planned, reviewed and evaluated jointly between the apprentice and a tutor, teacher, mentor or manager
- Allow access as and when required by the apprentice either to a tutor, teacher, mentor or manager
- Be delivered during contracted working hours
- Be delivered through one or more of the following methods: individual and group teaching, e-learning, distance learning, coaching, mentoring, feedback and assessment, collaborative/networked learning with peers, guided study and induction.
- Be characterised by formal or planned taught sessions delivered predominantly by qualified training staff.

Examples of off-the-job training for the Land-based Engineering Apprenticeship are:

- Knowledge of different agricultural, horticultural or forestry and other land-based equipment
- Understanding health and safety requirements with regards to working with large machinery/equipment and lone working
- Essential Skills in Communication, Application of Number and Digital Literacy
- First aid training
- Taught sessions contributing to employee rights and responsibilities knowledge
- Induction where activities are covered away from normal work duties.

Evidence of off-the-job training

- Level 2/3 Knowledge based units
- Level 1/2 Essential Skills
- Employee rights and responsibilities
- Induction.

Off-the-job training must be recorded in a diary, workbook, portfolio, attendance records, job cards, draft invoices and timesheets. This evidence needs to be checked and signed by the assessor and employer.

On-the-job training

On-the-job training

For this framework the amount of on-the-job training is as follows:

Foundation Apprenticeship

Level 2 Diploma in Work-based Land-based Engineering Operations

Level 2 Diploma in Work-based Land-based Engineering Operations within the Land-based Engineering Foundation Apprenticeship - a minimum of 2584 on-the-job training hours must be delivered throughout the 24 months duration of the programme.

Apprenticeship

Land-based Engineering Apprenticeship – a minimum of 1615 on-the-job training hours must be delivered throughout the 15 months duration of the programme

How this requirement will be met

These hours may vary depending on previous experience and attainment of the apprentice. Where a learner enters an Apprenticeship agreement having previously attained or acquired the appropriate competencies or knowledge, this prior learning needs to be recognised and documented using the relevant method of credit transfer, exemption or RPL procedures (as off-the-job above). The amount of on-the-job training required to complete the Apprenticeship under the Apprenticeship agreement may then be reduced accordingly, provided the total number of on-the-job hours for this framework can be verified for Apprenticeship certification.

Apprentices who commence training under a new Apprenticeship agreement with a new employer may bring a range of prior experience with them. When an apprentice can claim towards the on-the-job framework total through prior learning acquired from previous full-time education, employment or other vocational programmes, then the apprentice's learning programme should include 'customisation' allowing for RPL. Training providers are encouraged to identify additional on-the-job training programmes that customise the learning to the new workplace. Customisation programmes may include selecting appropriate additional or alternative unit(s) from QCF qualifications, or relevant units recognised as Quality Assured Lifelong Learning (QALL) through a Credit and Qualifications Framework Wales (CQFW) recognised body, or follow Essential Skills at a level higher than that specified in the framework, include one or more Wider Key Skills or other competency-based qualifications/units relevant to the workplace.

For apprentices who have already achieved the relevant qualifications, they must have been certificated within five years from the date of application for the Apprenticeship Certificate or have been continuously employed in the industry for five years.

Job roles within land-based engineering require a thorough level of technical competence and knowledge, which will be undertaken through work-based training, practice and experience.

Examples of on-the-job activities that a learner will be focusing on within the workplace for the Land-based Engineering Apprenticeship are:

- Safe use of equipment and machines
- Environmental awareness
- Employability skills
- Team working and communications
- Task specific workplace instructions or team briefings
- Taught sessions by the workplace line manager/instructor as opposed to formal planned taught sessions off-the-job on employee rights and responsibilities knowledge
- Induction where activities are covered within normal work duties.

Evidence of on-the-job training

Level 2/3 Diploma in Work-based Land-based Engineering

Level 1/2 Essential Skills in Communication, Application of Number and Digital Literacy

On-the-job training must be recorded in a diary, workbook, portfolio, attendance records, job cards, draft invoices and timesheets. This evidence needs to be checked and signed by the assessor and employer.

Wider key skills assessment and recognition

While Wider Key Skills are not a **mandatory** part of the framework, training providers are encouraged to provide apprentices the opportunity to achieve them.

For this framework, there are natural opportunities for Wider Key Skills to be embedded within the mandatory units of the qualifications listed in this document.

Improving own learning and performance

Industry felt that improving own learning and performance is sufficiently covered by the planning, monitoring and evaluating of the apprentices' progress within the review carried out with their supervisor/tutor.

However, providers and apprentices are encouraged to record where and when these Wider Key Skills are being used so that evidence can be gathered to allow apprentices to claim RPL for these skills in the future.

Working with others

Industry felt that working with others is sufficiently covered by the whole Apprenticeship programme as apprentices will often be working as part of a team in their job role.

However, providers and apprentices are encouraged to record where and when these Wider Key Skills are being used so that evidence can be gathered to allow apprentices to claim RPL for these skills in the future.

Problem solving

Industry felt that problem solving is sufficiently covered by the Diploma in Work-based Land-based Engineering qualification as apprentices will be resolving problems as part of their learning and work.

However, providers and apprentices are encouraged to record where and when these Wider Key Skills are being used so that evidence can be gathered to allow apprentices to claim RPL for these skills in the future.

Additional employment requirements

For both the Foundation Apprenticeship and Apprenticeship

The Land-based Engineering industry has requested the completion of **four** of the following Additional Employment Requirements, two Mandatory and two Optional. These additional employment requirements will enhance the Apprenticeship and facilitate employment within the industry. Additional Employment Requirements are not required for certification and may not be funded.

Note: If an apprentice has previously achieved the Level 2 Foundation Apprenticeship, it is recommended that they take different courses.

Mandatory:

- Emergency First Aid (one-day course meeting the requirements outlined by Health and Safety Executive HSE)
- Safe Use of Abrasive Wheel Machines

Two other accredited, legislative or nationally recognised occupational tests relevant to the industry (suggested list below):

- Basic Tractor Driving
- Safe Use of Pedestrian Controlled Two-Wheeled Tractors
- Safe Use of Turf Maintenance Equipment
- All-Terrain Vehicle (ATV/UTV) – Safe Use / Handling
- Approved Manufacturers' Technical Courses
- Sustainable Management of Natural Resources (SMNR)
- Two Wheel Machines
- FLT/Telescopic/Counterbalance - Safe Use of
- Push/Ride on Mowers - Safe Use of
- Manual Handling
- Brush Cutters - Safe Use of
- Chain Saws - Maintenance and Cross Cut
- Sprayers - Safe Use of (PA1 + PA6 or PA2)
- Loader and Digger - Safe Use of "180° or 360°"

apprenticeship FRAMEWORK

For more information visit-
www.acwcerts.co.uk/frameworks-library

