

apprenticeship FRAMEWORK

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?

Please use this link to see if this is the latest issued version of this framework:

afo.sscalliance.org/frameworkslibrary/index.cfm?id=FR02418

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CHANGES TO REQUIREMENTS FOR APPRENTICESHIP STARTS FROM 14TH 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 2016. Apprenticeship starts before this date must continue to meet the 2013 SASW requirements for Essential Skills and Employer Rights and Responsibilities.

Alternatives for Essential Skill qualifications

Foundation apprenticeships (Level 2): Where Essential Skills qualifications are specified in a foundation apprenticeship framework (Level 2), the apprenticeship framework must specify as a Welsh certificate requirement, the acceptance of one of the following recognised proxy qualifications.

For Communication:

- a. GCSE or iGCSE qualification in English language or literature to at least grade G (Level 1 equivalent); or
- b. O Level qualification in English language or literature to at least grade E; or
- c. A/AS Level qualification in English language or literature to at least grade E; or
- d. SCQF Level 4 – Communication Core Skills (Oral communication and written communication); or
- e. SQA National 4 English; or
- f. Functional Skills or Key Skills literacy qualifications in English provided the proxy qualification(s) attained are at Level 1 or above.

For Application of Number:

- a. GCSE or iGCSE qualification in Mathematics to at least grade G (Level 1 equivalent); or
- b. O Level qualification in Mathematics to at least grade E; or
- c. A/AS Level qualification in Mathematics to at least grade E; or
- d. SCQF Level 4 – Numeracy Core Skill (Graphical Information and using number); or
- e. SQA National 4 Mathematics ; or
- f. Functional Skills or Key Skills numeracy qualifications in Mathematics provided the proxy qualification(s) attained are at Level 1 or above.

Apprenticeships (Level 3): Where Essential Skills qualifications are specified in an apprenticeship framework (Level 3), the apprenticeship framework must specify as a Welsh certificate requirement, the acceptance of one of the following recognised proxy qualifications.

For Communication:

- a. GCSE or iGCSE qualification in English language or literature to at least grade C (Level 2 equivalent); or
- b. O Level Qualification in English language or literature to at least grade C; or
- c. A/AS Level qualification in English or literature to at least grade E; or
- d. SCQF Level 5 – Communication Core Skills (Oral communication and written communication); or
- e. SQA National 5 English; or
- f. Functional Skills or Key Skills literacy qualifications in English provided the proxy qualification(s) attained is at Level 2 or above.

For Application of Number:

- a. GCSE or iGCSE qualification in Mathematics to at least grade C (Level 2 equivalent); or
- b. O Level Qualification in Mathematics to at least grade C; or
- c. A/AS Level qualification in Mathematics to at least grade E; or
- d. SCQF Level 5 – Numeracy Core Skill (Graphical information and using number); or
- e. SQA National 5 Mathematics; or
- f. Functional Skills or Key Skills numeracy qualifications in Mathematics provided the proxy qualification(s) attained are at Level 2 or above.

Higher Apprenticeships (Levels 4-7): Essential Skills requirements are as for an apprenticeship frameworks at Level 3.

CHANGES TO REQUIREMENTS FOR APPRENTICESHIP STARTS FROM 14TH OCTOBER 2016

Employer Rights and Responsibilities (ERR)

The final modification to SASW is to Employer Rights and Responsibilities (ERR) which is no longer compulsory in frameworks. Please refer to the Employer Rights and Responsibilities section within the framework document to confirm specific requirements.

Additional Information

It should be noted that SASW has also been modified to reflect existing improvements to Essential Skills Wales Qualifications. These improvements to ESW qualifications were signalled by the revised names:

- Essential Skills Wales Communication is now Essential Communication Skills (still 6 credits in size)
- Essential Skills Wales Application of Number Skills is now Essential Application of Number Skills (still 6 credits in size)
- Essential Skills Wales Information Communication Technology Skills is now Essential Digital Literacy Skills (still 6 credits in size)

Whilst there have been some amendments to the content of ESW qualifications, the most significant change has been to the assessment methodology for these qualifications.

From 1 January 2016, all new starts have had to follow the revised Essential Skill qualifications.

The updated version of SASW, and guidance documents, can be accessed here:

<http://gov.wales/topics/educationandskills/skillsandtraining/apprenticeships/providers/?lang=en&dgd>

Over the coming months, the Essential Skills section within AFO will be amended to reflect the SASW modifications and all current frameworks will be updated and reissued to incorporate these changes. In the meantime, if you are in any doubt as to the requirements of any framework then please contact the relevant Issuing Authority.

Land-based Engineering (Wales)

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Framework summary

Land-based Engineering

Land-based Engineering

Pathways for this framework at level 2 include:

Pathway 1: Land-based Engineering

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)

B2 - IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations (QCF)

B3 - Edexcel Level 2 Diploma in Work-based Land-based Engineering Operations (QCF)

B4 - IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment (QCF)

This pathway also contains information on:

- Employee rights and responsibilities
- Essential skills

Land-based Engineering

Land-based Engineering

Pathways for this framework at level 3 include:

Pathway 1: Land-based Engineering

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)

B2 - IMIAL Level 3 Diploma in Work-based Land-based Engineering (QCF)

B3 - Edexcel Level 3 Diploma in Work-based Land-based Engineering Operations (QCF)

This pathway also contains information on:

- Employee rights and responsibilities
- Essential skills

Framework information

Information on the Publishing Authority for this framework:

Lantra

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

Issue number: 2	This framework includes:
Framework ID: FR02418	Level 2 Level 3
Date this framework is to be reviewed by: 31/08/2016	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.

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: service technician, sports/groundcare technician, demonstrator, independent technician or workshop supervisor/manager.

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.

Developer of this framework

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Revising a framework

Contact details

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Why this framework is being revised

Lantra have been approached by 2 Awarding Organisations, (IMI Awards and Pearsons) to add their combined competence and knowledge qualifications to the Land-based Engineering framework.

Summary of changes made to this framework

Addition of Work-based Diplomas to the Foundation and Apprenticeship framework.

- IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations (QCF) - 600/5109/7
- IMIAL Level 3 Diploma in Work-based Land-based Engineering Operations (QCF) - 600/5128/0
- IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment (QCF) - 601/0608/6
- Edexcel Level 2 Diploma in Work-based Land-based Engineering Operations (QCF) - 600/3577/8
- Edexcel Level 3 Diploma in Work-based Land-based Engineering Operations (QCF) - 600/3550/X

Qualifications removed

None

Qualifications added

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

- 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 (QCF) - 600/5128/0
- Edexcel Level 2 Diploma in Work-based Land-based Engineering Operations (QCF) -600/3577/8
- Edexcel Level 3 Diploma in Work-based Land-based Engineering Operations (QCF) -600/3550/X

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 machines. 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
- Groundcare machinery - including garden, sports turf and local grounds maintenance machinery
- Forestry/arboriculture machinery - including chainsaws and chippers
- Fixed machinery - including grain/crop processing and milking equipment
- Power Equipment - including Honda power equipment - ride on, pedestrian and robotic mowers, the brush cutting range, 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.

Small and medium sized businesses dominate the land-based and environmental sector with 80% of the land-based engineering businesses employing fewer than ten people, which emphasises the need for the workforce to be highly skilled. 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.

Research carried out by Lantra in 2010 revealed that the land-based engineering industry in Wales represents 1% of the businesses (140) within the land-based and environmental sector and 1% of the employment with 900 employees (total for the sector is 90,750). However, land-based engineering is a valuable industry as it provides support for several other industries within the land-based and environmental sector. The technology used within these industries and others evolve continuously 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 research also showed that the industry has an ageing workforce with 56% of the employees aged 40 or over. 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, computer literacy, customer care and basic technical skills. 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 review 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: sports and groundcare technician or service technician.
- Job roles at Level 3 may include: demonstrator, independent technician or workshop supervisor.

Further information on the land-based engineering industry can be found at: www.lantra.co.uk.

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.

Further careers information can be found on Lantra's website www.lantra.co.uk/careers.

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

Through the development of the Land-based Engineering framework, it has been agreed with the industry that the minimum duration of the Foundation Apprenticeship is 24 months and the Apprenticeship is 15 months.

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/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 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

The land-based engineering industry wants the entry requirements for the Apprenticeship to be flexible, so therefore has suggested that one of the following should be completed:

- Level 2 Diploma in Land-based Technology

- Level 2 Diploma in Work-based Land-based Engineering
- Level 2 NVQ in Land-based Service Engineering
- Practical experience within the industry
- 3 GCSEs (A-C)/A levels.

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 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.

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

Title for this framework at level 2

Land-based Engineering

Pathways for this 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

For apprentices completing the Honda route of the Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment, a minimum of 122 credits which is made up as follows:

- Combined qualification - 104 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 Technician	Service technicians 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 Technician	Sports groundcare technicians work on a wide range of specialist vehicles and machines 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

B2 - IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B2a	600/5109/7	IMI Awards Ltd	109	660-780	N/A

B3 - Edexcel Level 2 Diploma in Work-based Land-based Engineering Operations (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B3a	600/3577/8	Pearson Education Ltd	109	660-780	N/A

Combined qualifications available to this pathway (cont.)

B4 - IMIAL Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B4a	601/0608/6	IMI Awards Ltd	104	630-650	N/A

Relationship between competence and knowledge qualifications

There is a choice of two qualifications, both of which include competence and knowledge.

B1, B2 and B3 - Level 2 Diploma in Work-based Land-based Engineering

or

B4 - Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment.

If learners choose to take **B1, B2 or B3** - the competence and knowledge elements will be achieved through completion of the mandatory and optional units listed within the awarding organisation's (City & Guilds, IMI Awards and Pearson Education) 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)

If learners choose to take **B4** - the competence and knowledge elements will be achieved through completion of the mandatory and optional units listed within the awarding organisation's (IMI Awards) guidance and must total a minimum of 104 credits. At least 20 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 a land-based engineering work area (10 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)

Transferable skills (Wales)

Essential skills (Wales)

	Minimum level	Credit value
Communication	1	6
Application of numbers	1	6
IT	1	6

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/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 Agriculture
- Level 3 Certificate in Work-based Agriculture
- Level 3 Diploma in Work-based Agriculture
- Level 3 BTEC Diploma/Extended Diploma in Agriculture.

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 technician or parts person.

For apprentices who wish to continue their development of skills and qualifications beyond Level 3, opportunities exist to progress further into Higher Education with Foundation Degrees/Degrees. These are explained in the progression from the Apprenticeship section.

Further information on careers in the land-based engineering industry including job profiles, progression maps and case studies can be found at www.lantra.co.uk/careers.

Employee rights and responsibilities

Employee Rights and Responsibilities (ERR) within the Foundation Apprenticeship in Land-based Engineering

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 www.lantra.co.uk/ERR

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.

Certification Requirements for ERR and Apprenticeship claim as of the 2nd September 2013.

As of the 2nd September 2013 all providers and apprentices must complete 2 new forms:

1. A new universal ERR Form which needs to be completed when an apprentice has successfully finished the ERR workbook.

2. All providers and apprentices must also complete the new Apprenticeship Certification Claim Form when applying for the Apprentice's completion certificate.

These forms should be uploaded onto Apprenticeship Certification Wales (ACW) when claiming completion of the framework. Both forms can be accessed at www.acwcerts.co.uk/

Level 3

Title for this framework at level 3

Land-based Engineering

Pathways for this 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.
Independent Technician	Independent technicians are self-employed and are usually very skilled in 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.
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 customers 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

B2 - IMIAL Level 3 Diploma in Work-based Land-based Engineering (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B2a	600/5128/0	IMI Awards Ltd	60	360-480	N/A

B3 - Edexcel Level 3 Diploma in Work-based Land-based Engineering Operations (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B3a	600/3550/X	Pearson Education Ltd	60	360-480	N/A

Relationship between competence and knowledge qualifications

There is one qualification, Level 3 Diploma in Work-based Land-based Engineering, 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 (C&G, IMI Awards and Pearson Education) 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).

Transferable skills (Wales)

Essential skills (Wales)

	Minimum level	Credit value
Communication	2	6
Application of numbers	2	6
IT	2	6

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 learners may progress straight onto the Apprenticeship from another programme.

Progression onto the Apprenticeship

The Land-based Engineering industry wants the entry requirements for the Apprenticeship to be flexible, so therefore has suggested that one of the following should be completed:

- 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
- Relevant experience and practical skills within the industry
- 3 GCSEs (A-C)/A levels.

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, Foundation Degree

or Degree (BSc). Examples of courses available across the UK include:

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

For apprentices who wish to continue their development or skills and qualifications beyond Degree level, opportunities exist to progress further in Higher Education with courses such as a Master's Degree (MSc), including:

- MSc Agricultural and Environmental Engineering
- MSc Mechanical Engineering and Management

Some useful websites to visit regarding Higher Education are www.ucas.co.uk, or www.prospects.ac.uk, both of these have information about courses and providers along with specific information on entry requirements.

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.

Further information on careers in the land-based engineering industry including job profiles, progression maps and case studies can be found at www.lantra.co.uk/careers.

UCAS points for this pathway: N/A

Employee rights and responsibilities

Employee Rights and Responsibilities (ERR) within the Apprenticeship in Land-based Engineering

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 www.lantra.co.uk/ERR;

Apprentices who have undertaken a Foundation Apprenticeship may have already completed the ERR workbook or they may have undertaken an accredited unit. These apprentices will not be required to repeat this section but they will be required to provide the Foundation Apprenticeship Certificate as evidence of completion at the time of certification of the Apprenticeship.

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.

Certification Requirements for ERR and Apprenticeship claim as of the 2nd September 2013.

As of the 2nd September 2013 all providers and apprentices must complete 2 new forms:

1. A new universal ERR Form which needs to be completed when an apprentice has successfully finished the ERR workbook.
2. All providers and apprentices must also complete the new Apprenticeship Certification Claim Form when applying for the Apprentice's completion certificate.

These forms should be uploaded onto Apprenticeship Certification Wales (ACW) when claiming completion of the framework. Both forms can be accessed at www.acwcerts.co.uk/

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 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. Lantra's research predicts that 110,000 people will be needed over the next decade across the land-based sector.

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 (Wales)

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 practise 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 Diploma in Work-based Land-based Engineering Operations

- The total amount of learning hours for apprentices completing the Level 2 Diploma in Work-based Land-based Engineering, which includes both on and off the job training for the Land-based Engineering Foundation Apprenticeship is 975 over a 24 month period.

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

- The total amount of learning hours for apprentices completing the Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment, which includes both on and off the job training for the Land-based Engineering Foundation Apprenticeship is 945 over a 24 month period.

Apprenticeship

- The total amount of learning hours which includes both on and off the job training for the Land-based Engineering Apprenticeship is 660 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

All work-based diplomas

- Land-based Engineering Foundation Apprenticeship - a minimum of 587 off-the-job training hours must be delivered throughout the 24 months duration of the programme.

Apprenticeship

- Land-based Engineering Apprenticeship - a minimum of 403 off-the-job training hours must be delivered throughout the 15 months duration of the programme.

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 Qualifications and Credit Framework (QCF) credit transfer for achievements within the QCF, or through recording of exemptions for certificated learning outside of the QCF, 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 QCF guidance on Claiming Credit for further details). To count towards Apprenticeship certification, previous experience must be recorded using the appropriate awarding organisation's QCF 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 Information and Communication Technology
- 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 388 on-the-job training hours must be delivered throughout the 24 months duration of the programme.

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

- Level 2 Diploma in Work-based Land-based Engineering Operations Power Equipment within the Land-based Engineering Foundation Apprenticeship - a minimum of 368 on-the-job training hours must be delivered throughout the 24 months duration of the programme.

Apprenticeship

- Land-based Engineering Apprenticeship – a minimum of 257 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 QCF credit transfer, QCF 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 Information Communication Technology.

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 (Wales)

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 employer requirements

For both the Foundation Apprenticeship and Apprenticeship

All learners are advised to complete at least one of the following, although it is not a requirement of the Specification of Apprenticeship Standards for Wales (SASW). The additional employer requirements will enhance and facilitate progression within the land-based engineering industry:

- Emergency First Aid (one-day course approved by Health and Safety Executive)
- Basic Tractor Driving
- Safe Use of Abrasive Wheel Machines
- Safe Use of Pedestrian Controlled Two-Wheeled Tractors
- Safe Use of Turf Maintenance Equipment
- All-Terrain Vehicle Handling
- Approve Manufacturers' Technical Courses.

apprenticeship
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