apprenticeship
FRAMEWORK

Engineering Environmental Technologies (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/framework_library

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Prentisiaethau Apprenticeships

Engineering Environmental Technologies (Wales)

Contents

Framework information

Information on the Issuing Authority for this framework:

SEMTA

The Apprenticeship sector for occupations in science, engineering and manufacturing technologies.

Issue number: 2	**This framework includes:**
Framework ID: FR03779	Level 2 ☐ Level 3 ☐ Level 4-7 ☒
Date this framework is to be reviewed by: 28/02/2017	**This framework is for use in: Wales**

Short description

Industrial activity in the past half century has created serious ecological problems. The list includes global warming, ozone depletion, loss of biodiversity, natural resource scarcity, air pollution, acid rain and toxic waste, to name just a few challenges. The Higher Apprenticeship framework for Engineering Environmental Technologies at Level 4 will train people to improve our manufacturing environmental performance (Manufacturing Engineering), specify and advise on better insulated low carbon domestic and industrial accommodation (Construction and the Built Environment) and propose new energy management systems that will reduce energy consumption and improve overall emissions performance (Building Services Engineering). This will facilitate progression to Level 5/6 qualifications and enable them to work towards 'Incorporated Engineer' status.

Contact information

Proposer of this framework

City and Islington College (CandI) has developed a cross sectoral flexible Higher Level Apprenticeship in Engineering Environmental Technologies. The Framework ensures a good balance between practical, work-related knowledge and the transferable skills needed for a sustainable and rewarding career, with opportunities to progress to higher level job roles. It has been designed to meet employer demand identified through direct consultation with the relevant SSCs - Semta, SummitSkills and Construction Skills, and with major employers forming a steering group such as Cummins Technologies, Kier, MITIE, Morgan Sindall Group plc, GKN Aerospace, A R Engineering, Sodexo, and SMEs including K McGloughlin Decorating, Strip Tinning Ltd., Vikoma International ltd and Protechnic Unit and with specific support from Providence Training, Landmarc, Bridgend College and the University of South Wales.

Developer of this framework

Name:	Bonita Searle-Barnes on behalf of City and Islington College of Further Education
Organisation:	City and Islington College of Further Education
Organisation Type:	Other
Job Title:	Consultant, working for city and Islington college of further education
Phone:	0207 7009419
Email:	trevor.hunter@candi.ac.uk
Postal address:	City and Islington College, The Marlborough Building, 383 Holloway Road, N7 0RN
Website:	HigherApprenticeships@candi.ac.uk

Issuing Authority's contact details

Issued by:	SEMTA
Issuer contact name:	David George
Issuer contact phone:	0845 6439001
Issuer Email:	IssuingAuthority@semta.org.uk

Contact Details	
Who is making this revision	Bonita Searle-Barnes
Your organisation	Semta
Your email address:	frameworks@semta.org.uk

Revising a framework

Why this framework is being revised

This framework is being revised to include:

- the change from Essential Skills Wales (ESW) to a new set of Essential Skills Qualifications (ESQ) requirements of the framework which only apply to new Apprenticeship starts on, or after, 1st January 2016
- an extension to the framework review date.

Summary of changes made to this framework

All pathways:

- **Transferable Skills (Wales) section** - Information about evidence requirements for the new Essential Skills Qualifications (ESQ) throughout the framework

Qualifications removed

Framework Developer to complete with relevant info

Qualifications added

Framework Developer to complete with relevant info

Qualifications that have been extended

Framework Developer to complete with relevant info

Purpose of this framework

Summary of the purpose of the framework

This Higher Apprenticeship framework for Engineering Environmental Technologies at Level 4 has been designed to provide the manufacturing and engineering sector in Wales with high grade technicians and engineers who have practical skills, combined with a higher education qualification. The programme will facilitate progression to Level 5/6 qualifications and enable apprentices to work towards Incorporated Engineer status.

The requirement for environmental engineers in Wales:

Manufacturing Engineering

• Skills in environmental technologies are a crucial component of this employment demand, particularly relating to high-value advanced manufacturing

• 776,400 manufacturing engineers will be required by 2020. There will be 28.3% replacement demand for the overall engineering sector; they will need state of the art skills including environmental technologies

• This is added to approximately 696,600 employed in the mature engineering sectors who will need skills/ upskilling in environmental technologies

• Job roles include Environmental Engineering Technician at technician level; Environmental Production Engineer at professional level and Environmental Engineering Manager (manufacturing) at management level.

Building Services Engineering

• There are approximately 526,390 employed in the sector, of which 78% are in an engineering capacity

• 558,420 more employees will be required by 2015

• Job roles include Technical Facilities/Contract Manager and Technical Business Development Manager

Summit Skills estimated that training on environmental technologies is required for 420,000 employees in 2012 in the building services engineering sector alone. The demand since then has been increasing. These ongoing requirements sit within a context of extremely challenging energy reduction targets set by the EU Commission, and ongoing skills challenges which have yet to be resolved by existing training provision in sectors with a strong engineering focus.

Construction and the Built Environment

• Construction employment in Wales is predicted to grow to approximately 111,300 people by

2016

• This will need an annual recruitment requirement of 4,280 people

• Job roles include Environmental Services Technician at technician level; Environmental Civil Engineer at professional level; and Environmental Manager at management level.

In the built environment the UK was recently found to be in the top three countries in the world in terms of working towards zero carbon. It is generally accepted that further investment in skills will be required to improve or maintain this position and deliver challenging EU targets for carbon reduction. For example, new skills will be needed to meet the high specification and low energy requirements of future buildings and infrastructure. The introduction of collaborative Building Information Modelling and Management (BIM) and increased growth in offsite manufacturing are also both set to play a pivotal role, as is the circular economy and approaches such as 'whole systems' to the design of buildings.

Sources of data above:

- Semta, Sector Skills Assessment for Science, Engineering and Manufacturing Technologies, England Report, December 2010
- Engineering UK, Engineering UK 2013, The State of Engineering, December 2012
- SummitSkills, Sector Skills Assessment Report for the Building Services Engineering Sector, United Kingdom, 2010
- CITB-Construction Skills, Construction Skills Network Blueprint for Construction 2013-2017, January 2013
- https://www.citb.co.uk/documents/research/csn%20outputs/wales-labour-market-intelligence-2012.pdf

The profiles of the three sectors catered for by the HA-EET differ in terms of composition of the workforce, however the Framework will develop apprentices' knowledge and skills relating to how engineering and environmental awareness can combine across the sectors for the benefit of all. For example, environmentally friendly processes implemented by manufacturing engineers such as re-manufacturing may help to produce sustainable materials which can be used in the construction and maintenance of new energy efficient homes and buildings. These knowledge and skills will be developed through cross-sector common modules examining regulations and the law, eco-business practices, the circular economy, calculating the carbon footprint and future green technologies.

Higher Apprentices in Engineering Environmental Technologies (HA- EET)

Engineering Environmental Technologies apprentices will develop competence, knowledge and skills that will allow them to respond to environmental issues such as how to improve our manufacturing environmental performance, specify and advise on better insulated low carbon domestic and industrial accommodation and propose new energy management systems that will reduce energy consumption and improve overall emissions performance. They will understand how engineering is interconnected across many different sectors and how to

manage the environmental aspects of their work, including harnessing new technologies to implement sustainable practices.

Tim Thomas, Head of Employment and Skills Policy at EEF, The Manufacturers' Organisation, pledged his organisation's support for the new Framework:

"In our Route to Growth campaign we set a benchmark for a 25% increase in STEM Apprenticeships at Level 3 and above by 2015. The new Environmental Engineering Higher Apprenticeship will help us to reach this target. Manufacturers do not prioritise vocational or academic pathways, but increasingly demand a combination of the two. Higher Apprenticeship programmes get young people started on a career, whilst at the same time studying university-level qualifications. Through learning on the job and spending time in the classroom, those undertaking the Apprenticeship will accumulate the qualifications, practical skills and experience all demanded by employers."

This support was echoed by Paul Jackson, Chief Executive of Engineering UK:

"Engineering is central to the UK's economy, and environmental technologies represent a wealth of opportunity, from offshore wind and new energy harvesting devices through to software solutions for sustainability management. Our research highlights the need for more recruits into engineering if we are to take advantage of these opportunities and the Higher Apprenticeship's business-backed model of academic and hands-on training will play an important role in safeguarding the UK economy and a home-grown future workforce."

Further support is also evident in the results of a recent survey of employers in the relevant sectors, with 88% saying they would be prepared to recruit an apprentice or up skill an existing member of staff with the HA-EET.

Challenges facing the manufacturing sector in Wales

• There is a demand from employers to increase the number of employees qualified to NVQ Level 4 or equivalent and above in order to increase productivity and for them to remain competitive

• The workforce is predominantly white, male, with around 86% aged in the 25 – 60 range, which means that the workforce is aging and 3,400 higher-level technical workers (690 per annum) are required over the period 2012-2016 to replace those retiring in Wales
Despite the recession, manufacturing employers still show a substantial demand for new recruits. In 2009, 3% of manufacturing establishments in Wales had vacancies for higher-level occupations. Of those manufacturing sites with vacancies for higher-level occupations:

- o 16% had vacancies for technicians
- o 7% had vacancies for professionals
- o 12% had vacancies for managers.

Welsh speaking apprentices may have opportunities to learn through the medium of the Welsh language. A Good Practice Guide for sector and standard setting bodies has been published by

the Welsh Government to assist in determining the demand for Welsh language skills, Welsh translations of national occupational standards and vocational qualifications through the medium of Welsh. The guide can be found on the Welsh Government website at: http://wales.go v.uk/topics/educationandskills/qualificationsin wales/welshmedium/welshmediumguidance/

The competence and knowledge qualifications in this framework contribute to general competence as measured in the Engineering Council's UK specification and is endorsed by the Institution of Mechanical Engineers (IMechE), the Institution of Engineering Technology (IET) and the Chartered Institute of Building (CIOB).

Aims and objectives of this framework (Wales)

The aim of this framework is to attract young people into the engineering environmental industry, and will provide apprentices with the skills, underpinning knowledge and transferable skills required to operate at an appropriate level in an engineering or manufacturing environment carrying out a wide variety of defined technician roles through the pathways described.

It will provide the engineering manufacturing and engineering sectors in Wales with high grade technicians and engineers who possess practical skills, combined with a higher education qualification to meet the environmental skills needs of employers and to help them to improve productivity and remain competitive.

Objectives:

1. Provide apprentices with the technical knowledge, skills and competence at Level 4 in one framework to operate at higher technician level in engineering environmental technologies

2. Attract learners who wish to gain a higher education qualification while receiving a salary through a work based learning route

3. Attract learners from diverse backgrounds to help address the equality and diversity challenges faced by the sector, including those of an aging workforce

4. Develop apprentices employability skills making them more attractive to all employers whichever career they choose

5. Help improve recruitment and retention rates within the industry by offering appropriate career progression into high level jobs and training, working towards Engineering Technician (Eng Tech) status and Incorporated Engineer (IEng) status

6. Act as essential preparation for those who will eventually operate at Level 4, 5, 6 and 7

Entry conditions for this framework

Employers wish to attract applicants who have an interest in working in construction and the built environment, building services engineering or engineering manufacture sectors and who come from a diverse range of backgrounds with a wide range of experience, achievements or qualifications.

Please note: Applicants for this apprenticeship framework need to be 18+ years

Entry to this framework is flexible in that applicants:

• may have a variety of qualifications such as A levels, Welsh Baccalaureate, Certificate/ Diploma in a construction/engineering discipline OR

• may have an Apprenticeship in for example: Engineering Manufacture, Heating and Ventilation, Plumbing, Building Energy Management Systems or a Construction discipline OR

• may have completed a Pathways to Apprenticeship programme in a relevant discipline OR

• without formal qualifications can show, possibly through a portfolio, that they have the potential to complete this apprenticeship, through having previously worked in the sector at Level 3 OR

• they are currently employed in the sector and are looking for personal development and career progression.

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.

Initial Assessment

It is highly likely that applicants will be asked to undertake a variety of tests which will include English, Maths, spatial awareness and problem solving, supported by an interview. These are not a meant as a barrier to entry but more to gauge the ability of the applicant to achieve the programme and to tailor the individual learning plan to meet their needs and those of the employer and to recognise prior qualifications and experience.

Rules to avoid the need to repeat qualifications

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

prior learning and recognising prior experience. 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.

It is understood that where applicants have accredited prior learning that apprentices must be offered training which helps them to develop new skills and learning at a higher level.

Essential Skills Wales

Key skills are accepted as alternatives to Essential Skills Wales qualifications, provided the Key Skills Certificate(s) attained are at the same level(s) as those specified for Essential Skills Wales Qualifications.

It is a requirement that entrants should have completed the Essential Skills in Communication and Application of Number at Level 2 on entry to the framework. These could be achieved either through completing Essential/Key Skills at Level 2, or GCSEs / O levels grade C or above or A levels in the required subjects. For further details please look in the transferable skills section for further guidance on minimum grades and qualification titles.

Essential Skills Wales qualifications achieved in the context of the Welsh Baccalaureate Qualification (WBQ) can be accepted, provided the specific certification of the title(s) and level(s) of those ESW qualifications is provided. The WBQ certificate itself does not provide this specific evidence.

Note:

Please be aware that from 1st September 2015 the new Essential Skills Qualifications (ESQ) will be available. Any apprentices registered on a SASW Apprenticeship **on or after 1st January 2016 must undertake** the required mandatory ESQ's in Communication Skills and Application of Number Skills (at the level specified in the framework). Please also note that some frameworks may also require Essential Digital Literacy Skills to be achieved.

Also as from 1st September 2015 there will be new GCSE's with ESQ content that may be considered as proxies in the future, this will be confirmed at a later date by the Welsh Government and Qualifications Wales.

The Welsh Baccalaureate Qualification (WBQ) is also changing later this year and the certification will include the ESQ and GCSE's components. Candidates undertaking the new WBQ will not be required to provide individual certificates as evidence.

Proposed changes in 2016 include a new set of ESQ qualifications: Essential Communication Skills, Essential Application of Number Skills, and Essential Digital Literacy Skills. Learners who have enrolled prior to 31st December 2015 can continue to work towards either Key Skills / Essential Skills Wales (AON, Comms, and ICT / Digital Literacy) which will be accepted within SASW.

Knowledge qualifications

If applicants already have one of the knowledge qualifications (see knowledge qualifications pages) before starting their apprenticeship, they may count this and will not have to repeat the qualification providing they have achieved this qualification within five years of starting their Apprenticeship. The hours that were spent gaining the qualification may be counted towards the total training hours for the apprenticeship. For example, they may have already achieved the knowledge element as part of the Welsh Baccalaureate. The hours that were spent gaining the qualification may be counted towards the total hours required for this framework.

The Welsh Baccalaureate with its Core programme of personal learning and development studies along with options such as NVQs, Vocational Qualifications and Principal Learning (Engineering World, Discovering Engineering Technology and Engineering the Future) could provide significant opportunities for accreditation of Prior Learning against the components of this framework.

Training providers/colleges should be able to advise entrants on the potential reduction in programme duration that could result from accrediting previous qualifications and experience.

Competence qualifications

The competence qualification in this framework is new so applicants will not have achievedthis qualification in its entirety but may have achieved units towards before starting their apprenticeship. The relevant Awarding Organisation will be able to advise you on the viability of these with regard to APL.

It is important however that there is agreement between the employer and the apprentice that the applicant is currently competent.The hours that were spent gaining the units may be counted towards the total training hours for the apprenticeship.

Wider Key Skills

Wider Key Skills qualifications previously attained in the context of the Welsh Baccalaureate Qualification (WBQ) can be accepted, provided the specific proof of certification of the title(s) and level(s) of those qualifications is provided. The WBQ certificate does not provide this specific evidence.

Prior experience in the sector

Applicants that are already working in the sector or who have recently worked in the sector at the appropriate level can apply to have their experience formally recognised by an Awarding Organisation and this could count towards the qualification(s) in this framework.

Level 4

Title for this framework at level 4

Higher Apprenticeship in Engineering Environmental Technologies

Pathways for the framework at level 5:	
Pathway 1:	Engineering Environmental Technologies (Construction and the Built Environment)
Pathway 2:	Engineering Environmental Technologies (Manufacturing Engineering)
Pathway 3:	Engineering Environmental Technologies (Building Services Engineering)

Level 4, Pathway 1: Engineering Environmental Technologies (Construction and the Built Environment)

Description of this pathway

Engineering Environmental Technologies (Construction and the Built Environment)

Total minimum credit value = 280 credits

Pathway duration approximately 42 months depending on the qualification and unit options selected

Pathway with minimum total training hours = 1,369

- Competence = 400 hours/ 130 credits
- Knowledge = minimum 500 hours (based on the smallest technical certificate training hours)
- Knowledge = minimum 120 credits (based on the smallest technical certificate credit)
- Essential Skills Wales (notional value 60 hours x 3)/18 credits or Key skills at the same level
- Wider Key Skills (IOLP & WWO) = 120 hours /12 credits
- Mentoring (154 weeks x 1 hour/week) = 154 hours
- ERR = 15 minimum hours

Year 1 = 391 Hours Year 2 = 391 Hours Year 3= 391 Hours Year 4 = 196 Hours

Minimum off-the-job training hours = 969 training hours
Knowledge - minimum of 500 training hours plus 469 additional training hours for Essential Skills Wales, Wider Key Skills, ERR and Mentoring.

Professional recognition

The Chartered Institute of Building (CIOB) recognise that this apprenticeship pathway is based on proven, industry recognised qualifications that provide the necessary knowledge and skills development to qualify the holder for Associate Membership of the Institute. This is automatic recognition, this is the only pathway where someone automatically qualifies as an Associate Member. Not withstanding the need to register and pay the fee.

For further information on achieving associate membership please use the web-link below:
www.ciob.org.uk/membership/grades

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

There are no additional requirements other than the general entry conditions

Job title(s)	Job role(s)
Construction Technical Supervisor	Manage construction projects in terms of quality, cost, time and sustainability
Built Environment Sustainability Manager	Liaise with Project Management Team pre/post tender to achieve sustainable project targets
Supply Chain Co-ordinator	Procuring and advising on sustainable resource solutions to ensure project supply chain co-ordination
Retrofit Technical Site Supervisor	Manage existing buildings stock in terms of quality, cost, time and sustainability

Qualifications

Competence qualifications available to this pathway

C1 – - Pearson Edexcel Level 4 NVQ Diploma in Engineering Environmental Technologies (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	600/8393/1	Pearson Education Ltd	130	400	N/A

Knowledge qualifications available to this pathway

K1 – Pearson BTEC Level 4 HNC Diploma in Construction and the Built Environment (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	500/8276/0	Pearson Education Ltd	120	500	N/A

K2 – Foundation Degree FdSc Facilities Management

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	N/A	Glyndwr University	240	N/A	N/A

K3 – HNC Building Studies

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K3a	N/A	University of South Wales via Bridgend College	120	N/A	N/A

Combined qualifications available to this pathway

N/A

Relationship between competence and knowledge qualifications

K1 - K3 provide underpinning knowledge for C1

The designated Technical Certificates provide the underpinning knowledge for the competence qualification in this pathway. The knowledge qualifications deliver essential underpinning knowledge which supports the fundamental scientific, technical and mathematical principles that equip apprentices with the understanding required to operate effectively and efficiently at a high level within the construction and the built environment.

Delivery methods for knowledge based qualifications may vary, from a conventional college-based environment, to delivery through a combination of this and written/ web-based/ distance learning materials.

Assessment of the competency qualification should be in line with the "Consolidated Assessment Strategy for Construction and the Built Environment" available from the CITB website and hotlinked below:

http:/ /www.citb.co.uk/Qualifications-Standards/qualification-framework/ - Strategy found under QCF Qualification Development Process.

C1 - Pearson Edexcel Level 4 NVQ Diploma in Engineering Environmental Technologies

(QCF) Mandatory Core units

Learners must complete both units regardless of what pathway is to be completed:

- Ensure Compliance with Legal, Regulatory, Ethical and Social Requirements
- Managing the Development of Self and Others

Construction and Built Environment Pathway (CBE)

Learners must complete all units from this group:

- Planning Construction Work Processes and Efficient Use of Resources in Construction and the Built Environment
- Monitoring Construction and Installation Operations and Resources to Minimise Energy and Waste in Construction and the Built Environment
- Monitoring Supplies of Resources to Meet Project Sustainability Requirements in Construction and the Built Environment

- Maintaining Systems for Health, Safety, Welfare and Environmental Protection in the Workplace
- Developing Working Relationships in Construction and the Built Environment

Optional Units for CBE:

Learners may take their remaining credits from this group:

- Confirming Project Energy Efficiency And Carbon Minimisation Requirements And Measures In Construction and The Built Environment
- Implementing Resource Efficient Procurement Processes In Construction And The Built Environment
- Implementing Project Information And Communication Systems And Procedures In Construction And The Built Environment
- Co-ordinating Work Operations And Resources To Meet Project Requirements In Construction And The Built Environment
- Co-ordinating The Logistics For Work To Existing Occupied Properties In Construction And The Built Environment
- Monitoring The Assembly Processes To Achieve Sound Construction
- Monitoring Project Quality, Progress And Cost In Construction And The Built Environment
- Plan, Allocate And Monitor Work In Own Area Of Responsibility

Pearson UK provide a range of resources to support apprentices, employers and learning providers delivering these qualifications. These resources will help stakeholders to:

- Understand what Higher Apprenticeships are, what they comprise of and require
- Spread best practice approaches to this Higher Apprenticeship among all learning providers
- Provide trustworthy, focused, accessible, engaging learning content covering core and mandatory units
- Enable learners to adopt successful study skills and approaches for their programme

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.

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 ☒

If YES, please state the grade/level required for English and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

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 ☒

If YES, please state the grade/level required for Maths and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

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** ☒

If YES, please state the grade/level required for **Digital Literacy (**ICT) and give a brief **REASON** as to why this is required:
Enter alternative grade/level requirements and reasons here.

Progression routes into and from this pathway

Progression routes into the pathway include those who have:

- appropriate prior experience of work in the sector. As a consequence the qualifications are not suitable for under 18yrs learners or
- achieved A Levels at Grades A*– E (achieved at any time prior to starting the Apprenticeship) plus GCSEs in English, Maths and a Science (grade C or above) or
- a Welsh Baccalaureate or
- a 14-19 Diploma in Construction or
- completed an Apprenticeship (Level 3) in Construction Building, Construction Civil Engineering or Construction Specialist or
- completed a Pathways to Apprenticeship programme in a relevant discipline or
- a Pearsons BTEC National Extended Diploma, Diploma or Subsidiary Diploma in Construction and the Built Environment or other related sectors or
- previous work experience or employment in this engineering sector at Level 3 or
- other relevant qualifications, experience or skills as given in the entry conditions.

Progression from this pathway for those who have completed a Higher Apprenticeship in Engineering Environmental Technologies (Construction and the Built Environment):

- employment as a technician or supervisor in Environmental Technologies (Construction and the Built Environment) - see job roles identified
- this Apprenticeship pathway provides excellent preparation towards professional registration with The Chartered Institute of Building (CIOB) as an Associate Member
- it may also, where appropriate, provide progression to a range of relevant honours degrees.

To further assist apprentices plan their careers we recommend they visit the following websites:

www.ucas.ac.uk/

www.engc.org.uk/

https://nationalcareersservice.direct.gov.uk/advice/planning/jobfami ly/Pages/construction.aspx

UCAS points for this pathway:

N/A

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

There are a variety of methods of achieving ERR as set out below:

Method 1 - Qualifications

1a. Excellence, Achievement and Learning Ltd. (EAL) have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:
EAL Level 2 Award in Employment Rights and Responsibilities for new Entrants into the Science, Engineering and Manufacturing Sectors (QCF)
QCF qualification ref no: 600/0290/6
Credit value: 5 credits

1b. Pearson have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements if Unit 2 is achieved.

Qualification details:
Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment (QCF)
QCF qualification ref no: 501/1793/2
Credit value: 4 credits

Please note: The Pearson BTEC Level 2 Award consists of a mandatory unit as an introduction to apprenticeships. Apprentices must then complete Unit 2 which covers the ERR requirements (included within content). This qualification is designed to be assessed in the context of the sector relevant to the apprenticeship framework being undertaken (i.e. Construction and the Built Environment, Manufacturing Engineering or Building Services Engineering)

1c. Cskills Awards have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:
Cskills Awards L1 Award in Employee Rights and Responsibilities (QCF)
QCF qualification ref No: 600/5877/8

Credit value: 1 credit

1d. Pearson have produced two Level 3 stand alone qualifications that can cover all 9 outcomes of ERR requirements if Units 2 & 4 are achieved.

Qualification details:

Pearson BTEC Level 3 Award in WorkSkills for Effective Learning and Employment (QCF)
QCF qualification ref No: 501/1791/9
Credit value: 4 credits

Qualification details:
Pearson BTEC Level 3 Diploma in Construction & the Built Environment (QCF)
QCF qualification ref No: 500/7137/3 (Unit 43 'Employability in the Built Environment' H/600/0344)
Credit value: 10 credits

1e. City & Guilds have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements

Qualification details:
City & Guilds Level 2 Subsidiary Award in Employment and Personal Learning at Work (QCF)
QCF qualification ref no: 600/2819/1
Credit value: 2 credits

These qualifications will enable apprentices to both know and understand the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

Apprentices achieving the qualifications will have demonstrated that they have the underpinning knowledge relevant for the Construction and the Built Environment, Building Services Engineering or the Manufacturing Engineering sector.

Method 2 - Workbook

Semta has produced an Apprentice ERR workbook that is available from:
customercare@eal.org.uk

or

Construction Skills has produced an Apprentice ERR workbook/ training specification that is available from:
http://www.citb.co.uk/qualifications-standards/apprentice-frameworks/apprenticeship-frameworks-england/

The requirements for completing it must be explained to the apprentice right at the start of their training in order that they may take full advantage of their *company induction where

significant amounts of information towards the national outcomes will be covered.The workbook is intended to enable apprentices to know, understand and record the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

***Please note:** All apprentices must receive a company induction programme.

To claim final certification of the apprenticeship, one of the preceding forms of ERR evidence will be required, together with the ACW Universal Apprentice Certificate Claim form which is available from the Federation for Industry Sector Skills and Standards (Fisss) website: acwcerts.co.uk/

Level 4, : Engineering Environmental Technologies (Manufacturing Engineering)

Description of this pathway

Engineering Environmental Technologies (Manufacturing Engineering)

Total minimum credit value = 280 credits

Pathway duration approximately 42 months depending on the qualification and unit options selected

Pathway with minimum total training hours = 1,349

- Competence = 400 hours/ 130 credits
- Knowledge = minimum 480 hours (based on the smallest technical certificate training hours)
- Knowledge = minimum 120 credits (based on the smallest technical certificate credit
- Essential Skills Wales (notional value 60 hours x 3)/18 credits or Key skills at the same level
- Wider Key Skills (IOLP & WWO) = 120 hours /12 credits
- Mentoring (154 weeks x 1 hour/week) = 154 hours
- ERR = 15 minimum hours

Year 1 = 385 Hours Year 2 = 385 Hours Year 3= 385 Hours Year 4 = 194 Hours

Minimum off-the-job training hours = 949 training hours
Knowledge - minimum of 480 training hours plus 469 additional training hours for Essential Skills Wales, Wider Key Skills, ERR and Mentoring.

Professional recognition

The Institution of Mechanical Engineers (IMechE) and the Institution of Engineering and Technology (IET) recognise that this apprenticeship pathway provides the necessary skills, knowledge and experience to allow apprentices to apply for Engineering Technician status within their institutions. The apprenticeship does not confer automatic membership of any of these institutions as an Engineering Technician. Apprentices are free to apply to the institution of their choice and engage the process of registration. Please note each institution will charge a registration fee, details of these are available through the weblinks below.

www.theiet.org/

www.imeche.org/

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

There are no additional requirements other than the general entry conditions

Job title(s)	Job role(s)
Environmental Supervisor (Manufacturing Engineering)	Anticipates, identifies and evaluates potential hazardous engineering and manufacturing environmental risks. Assists with the application of Environmental Management Systems (EMS) to reduce environmental impacts associated with site operations
Health, Safety and Environmental Supervisor	Anticipates, identifies and evaluates potential hazardous conditions and environmental risks. Assists with the application of engineering and administrative controls via the Health, Safety and Environmental Management System (HSEMS).
Manufacturing Shop Operations Supervisor	Responsible for the daily activities of multiple production teams with cross functionality ensuring optimum productivity, quality and efficiency while minimising environmental hazards and impacts
Facilities Controls Engineer	Manages power and related infrastructure for manufacturing facilities to ensure that power, heating, ventilation, air conditioning, air pollution and filtration are kept at optimum values to maximise efficiency and minimise environmental impact.
Environmental Manufacturing Planning Engineer	Works with facilities and manufacturing planning engineers to ensure that new manufacturing equipment is selected, installed and commissioned in line with environmental standards and requirements, minimising power consumption, air and waste water pollution, solid wastes and environmental hazards .

Qualifications

Competence qualifications available to this pathway

C1 – Pearson Edexcel Level 4 NVQ Diploma in Engineering Environmental Technologies (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	600/8393/1	Pearson Education Ltd	130	400	N/A

Knowledge qualifications available to this pathway

K1 – Pearson BTEC Level 4 HNC Diploma in Manufacturing Engineering (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	500/8829/4	Pearson Education Ltd	120	480	N/A

K2 – HNC Engineering (Mechanical Manufacturing Engineering)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	N/A	University of South Wales via Bridgend College	120	N/A	N/A

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K3a	N/A	University of South Wales via Bridgend College	120	N/A	N/A

K4 – HNC Engineering (Measurement and Control Systems)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K4a	N/A	University of South Wales via Bridgend College	120	N/A	N/A

Combined qualifications available to this pathway

N/A

Relationship between competence and knowledge qualifications

K1 - K4 provide underpinning knowledge for C1

The designated Technical Certificates provide the underpinning knowledge for the competence qualification in this pathway. The knowledge qualifications deliver essential underpinning knowledge which supports the fundamental scientific and mathematical principles that equip apprentices with the understanding required to operate effectively and efficiently at a high level within the manufacturing engineering environment.

Delivery methods for knowledge based qualifications may vary, from a conventional college-based environment, to delivery through a combination of this and written/web based/distance learning materials.

Assessment of the units in the competency qualification should be carried out in line with :The units must be assessed in a work environment and must be assessed in accordance with the 'Common Requirements for National Vocational Qualifications (NVQ) in the QCF' which can be downloaded from Semta's website or requested via customerservices@semta.org.uk

Additional assessment requirements have been published by Semta. These additional assessment requirements are set down in Semta's Engineering NVQ QCF unit assessment strategy which can be downloaded from Semta's website or requested via customerservices@semta.org.uk

C1- Pearson Edexcel Level 4 NVQ Diploma in Engineering Environmental Technologies

(QCF) Mandatory Core units

Learners must complete both units regardless of pathway:

• Ensure Compliance with Legal, Regulatory, Ethical and Social Requirements
• Managing the Development of Self and Others

Manufacturing Engineering

Learners must complete all units from this group:

• Maintaining Systems for Health, Safety, Welfare and Environmental Protection in the Workplace

• Plan and Manage a Project Managing The Environmental Impact Of Work Activities In Manufacturing Engineering
• Developing Working Relationships
• Develop A New Product Manufacturing Process Design Strategy

Optional Units for Manufacturing Engineering pathway

Learners may take their remaining credits from this group

- Undertake Engineering Research
- Establish an Engineering Design Brief
- Schedule Activities for Engineering Methods and Procedures
- Manage A Tendering Process
- Develop And Implement A Risk Assessment Plan In Own Area Of Responsibility
- Prepare For And Support Quality Audits
- Identify Engineering Design Requirements of Clients
- Produce Engineering Specifications
- Create Engineering Designs
- Implement Engineering Processes
- Analysing and selecting parts for improvement
- Creating standard operating procedures (SOPs)
- Carrying out capability studies Carrying out capability studies
- Leading an analysis and selection of parts for improvement
- Leading the carrying out of capability studies
- Leading the application of Six Sigma methodology to a project
- Leading the creation of flexible production and manpower systems
- Leading policy deployment activities Hoshin Kanri, quality operating systems, business plan deployment
- Leading value management value engineering and value analysis activities
- Applying quality function deployment QFD

Pearson UK provide a range of resources to support apprentices, employers and learning providers delivering these qualifications. These resources will help stakeholders to:

•Understand what Higher Apprenticeships are, what they comprise of and require
•Spread best practice approaches to this Higher Apprenticeship among all learning providers

•Provide trustworthy, focused, accessible, engaging learning content covering core and mandatory units
•Enable learners to adopt successful study skills and approaches for their programme

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.

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 ☐ NO ☒

If YES, please state the grade/level required for English and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

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 ☒

If YES, please state the grade/level required for Maths and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

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** ☒

If YES, please state the grade/level required for **Digital Literacy (**ICT) and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

Progression routes into and from this pathway

Progression routes into the pathway include those who have:

- appropriate prior experience of work in the sector. As a consequence the qualifications are not suitable for under 18 yrs learners or
- achieved A Levels at Grades A*– E (achieved at any time prior to starting the Apprenticeship) plus GCSEs in English, Maths and a Science (at grade C or above)or
- a Welsh Baccalaureate or
- completed an Apprenticeship (Level 3) in Engineering Manufacture or similar or
- completed a Pathways to Apprenticeship programme in a relevant discipline or
- a 14 to 19 Advanced Diploma in Engineering or Manufacturing or
- previous employment in engineering or manufacturing at Level 3 or
- other relevant qualifications, experience or skills as given in the entry conditions.

Progression from this pathway for those who have completed a Higher Apprenticeship in Engineering Environmental Technologies (Manufacturing Engineering):

- employment as a technician or manager in Environmental Technologies (Manufacturing Engineering) - see job roles identified
- this Apprenticeship provides excellent preparation towards professional registration as an Engineering Technician (Eng Tech) with the IMechE and IET
- it may also, where appropriate, provide progression to a range of relevant honours degrees.

To further assist apprentices plan their careers we recommend they visit the following websites:

www.ucas.ac.uk/

www.engc.org.uk/

https://nationalcareersservice.direct.gov.uk/advice/planning/jobfamily/Pages/manufactureandengineering.aspx

UCAS points for this pathway:

N/A

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

There are a variety of methods of achieving ERR as set out below:

Method 1 - Qualifications

1a. Excellence, Achievement and Learning Ltd. (EAL) have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:
EAL Level 2 Award in Employment Rights and Responsibilities for new Entrants into the Science, Engineering and Manufacturing Sectors (QCF)
QCF qualification ref no: 600/0290/6
Credit value: 5 credits

1b. Pearson have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements if Unit 2 is achieved.

Qualification details:
Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment (QCF)
QCF qualification ref no: 501/1793/2
Credit value: 4 credits

Please note: The Pearson BTEC Level 2 Award consists of a mandatory unit as an introduction to apprenticeships. Apprentices must then complete Unit 2 which covers the ERR requirements (included within content). This qualification is designed to be assessed in the context of the sector relevant to the apprenticeship framework being undertaken (i.e. Construction and the Built Environment, Manufacturing Engineering or Building Services Engineering)

1c. Cskills Awards have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:
Cskills Awards L1 Award in Employee Rights and Responsibilities (QCF)

QCF qualification ref No: 600/5877/8
Credit value: 1 credit

1d. Pearson have produced two Level 3 stand alone qualifications that can cover all 9 outcomes of ERR requirements if Units 2 & 4 are achieved.

Qualification details:

Pearson BTEC Level 3 Award in WorkSkills for Effective Learning and Employment (QCF)
QCF qualification ref No: 501/1791/9
Credit value: 4 credits

Qualification details:
Pearson BTEC Level 3 Diploma in Construction & the Built Environment (QCF)
QCF qualification ref No: 500/7137/3 (Unit 43 'Employability in the Built Environment' H/600/0344)
Credit value: 10 credits

1e. City & Guilds have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements

Qualification details:
City & Guilds Level 2 Subsidiary Award in Employment and Personal Learning at Work (QCF)
QCF qualification ref no: 600/2819/1
Credit value: 2 credits

These qualifications will enable apprentices to both know and understand the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

Apprentices achieving the qualifications will have demonstrated that they have the underpinning knowledge relevant for the Construction and the Built Environment, Building Services Engineering or the Manufacturing Engineering sector.

Method 2 - Workbook

Semta has produced an Apprentice ERR workbook that is available from:
customercare@eal.org.uk

or

Construction Skills has produced an Apprentice ERR workbook/ training specification that is available from:
http://www.citb.co.uk/qualifications-standards/apprentice-frameworks/apprenticeship-frameworks-england/

The requirements for completing it must be explained to the apprentice right at the start of their training in order that they may take full advantage of their *company induction where significant amounts of information towards the national outcomes will be covered.
The workbook is intended to enable apprentices to know, understand and record the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

***Please note:** All apprentices must receive a company induction programme.

To claim final certification of the apprenticeship, one of the preceding forms of ERR evidence will be required, together with the ACW Universal Apprentice Certificate Claim form which is available from the Federation for Industry Sector Skills and Standards (Fisss) website: acwcerts.co.uk/

Level 4, Pathway 3: Engineering Environmental Technologies (Building Services Engineering)

Description of this pathway

Engineering Environmental Technologies (Building Services Engineering)

Total minimum credits = 280 credits

Pathway duration approximately 42 months depending on the qualification and unit options selected

Pathway with minimum total training hours = 1,369

- Competence = 400 hours/ 130 credits
- Knowledge = minimum 500 hours (based on the smallest technical certificate training hours)
- Knowledge = minimum 120 credits (based on the smallest technical certificate credit)
- Essential Skills Wales (notional value 60 hours x 3)/18 credits or Key skills at the same level
- Wider Key Skills (IOLP & WWO) = 120 hours /12 credits
- Mentoring (154 weeks x 1 hour/week) = 154 hours
- ERR = 15 minimum hours

Year 1 = 391 Hours Year 2 = 391 Hours Year 3= 391 Hours Year 4 = 196 Hours

Minimum off-the-job training hours = 969 training hours
Knowledge - minimum of 500 training hours plus 469 additional training hours for Essential Skills Wales, Wider Key Skills, ERR and Mentoring.

Professional recognition

The Institution of Mechanical Engineers (IMechE) and The Institution of Engineering and Technology (IET) recognise that this apprenticeship pathway provides the necessary skills, knowledge and experience to allow apprentices to apply for Engineering Technician status within their institutions. The apprenticeship does not confer automatic membership of any of these institutions as an Engineering Technician. Apprentices are free to apply to the institution of their choice and engage the process of registration. Please note each institution will charge a registration fee, details of these are available through the weblinks below.

www.theiet.org/

www.imeche.org/

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

There are no additional requirements other than the general entry conditions

Job title(s)	Job role(s)
Technical Facilities/Contract Manager	Management of the technical facilities / maintenance / installation of building services systems that provide and control lighting, power, water, heating and energy supply and environmental technology in buildings. Including planning, admin and customer /client relationships
Technical Business Development Manager	Responsibility for the development of a contract for the maintenance / installation of building services systems for control lighting, power, water, heating and energy supply and environmental technology in buildings. Including planning, contract procurement and customer/client relationships

Qualifications

Competence qualifications available to this pathway

C1 – Pearson Edexcel Level 4 NVQ Diploma in Engineering Environmental Technologies (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	600/8393/1	Pearson Education Ltd	130	400	N/A

Knowledge qualifications available to this pathway

K1 – Pearson BTEC Level 4 HNC Diploma in Construction and the Built Environment (QCF)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	500/8276/0	Pearson Education Ltd	120	500	N/A

K2 – HNC Building Services Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	N/A	University of South Wales via Bridgend College	120	N/A	N/A

Combined qualifications available to this pathway

N/A

Relationship between competence and knowledge qualifications

K1 & K2 provide underpinning knowledge for C1

The designated Technical Certificates provide the underpinning knowledge for the competence qualification in this pathway. The knowledge qualification delivers essential underpinning knowledge which supports the fundamental scientific and mathematical principles that equip apprentices with the understanding required to operate effectively and efficiently at a high level within the building services engineering environment.

Delivery methods for knowledge based qualifications may vary, from a conventional college-based environment, to delivery through a combination of this and written/ web-based/ distance learning materials.

Assessment of the units of the competency qualification should be in line with the Summit Skills Consolidated Assessment Strategy for Units and Qualifications of "Occupational Competence" in the Qualifications and Credit Framework (England, Northern Ireland and Wales) for the Building Services Engineering Sector, hotlinked below:

www.summitskills.org.uk/public/cms/File/QCF/Consolidated%20Assessment%20Strategy%20QCF%20Final%20Version%20April%202010%20v2.1a%20(06.10)%20fINAL%20vERSION%20amended.pdf

C1 - Pearson Edexcel Level 4 NVQ Diploma in Engineering Environmental Technologies

(QCF) Mandatory Core units

Learners must complete both units regardless of pathway:

- Ensure compliance with Legal, Regulatory, Ethical and Social Requirements
- Managing the Development of Self and Others

Building Services Engineering Pathway

Learners must complete all units from this group:

- Managing Health And Safety In The Building Services Engineering Work Location
- Managing Building Services Engineering Projects In The Work Location
- Manage The Environmental Impact Of Work Activities
- Managing the Effectiveness of a Building Services Engineering workforce

Optional Units for Building Services Engineering

Learners may take their remaining credits from this group

- Developing Estimates And Submitting Tenders For Building Services Engineering Projects
- Managing Contract Procedures For Building Services Engineering Projects
- Developing And Testing Building Services Engineering Project Design Solutions
- Preparing And Advising On Building Services Engineering Project Design Recommendations
- Preparing And Agreeing Detailed Building Services Engineering Project Designs
- Planning Work Methods, Resources And Systems To Meet Building Services Engineering Project Work Requirements
- Implementing Works To Meet Building Services Engineering Project Requirements
- Commissioning Building Services Engineering Systems After Installation
- Controlling Building Services Engineering Project Income And Expenditure
- Promote Equality of Opportunity, Diversity and Inclusion Across an Organisation
- Establish Risk Management Processes for an Organisation
- Designing Sustainable Building Services Engineering Systems
- Analysing and Monitoring Building Services Engineering Controls

Pearson UK provide a range of resources to support apprentices, employers and learning providers delivering these qualifications. These resources will help stakeholders to:

- Understand what Higher Apprenticeships are, what they comprise of and require
- Spread best practice approaches to this Higher Apprenticeship among all learning providers
- Provide trustworthy, focused, accessible, engaging learning content covering core and mandatory units
- Enable learners to adopt successful study skills and approaches for their programme

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.

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 ☒

If YES, please state the grade/level required for English and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

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 ☒

If YES, please state the grade/level required for Maths and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

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** ☒

If YES, please state the grade/level required for **Digital Literacy (**ICT) and give a brief **REASON** as to why this is required:

Enter alternative grade/level requirements and reasons here.

Progression routes into and from this pathway

Progression routes into the pathway include those who have:

- appropriate prior experience of work in the sector. As a consequence the qualifications are not suitable for under 18 yrs learners or
- achieved A Levels at Grades A*– E (achieved at any time prior to starting the Apprenticeship) plus GCSEs in English, Maths and a Science (at grade C or above) or
- a Welsh Baccalaureate or
- completed a Level 3 Engineering Apprenticeship in Building Services Engineering Technology and Project Management or Building Energy Management Systems or
- completed a Pathways to Apprenticeship programme in a relevant discipline or
- a 14-19 Advanced Diploma in either Construction and the Built Environment or Engineering or
- previous work experience or employment in engineering at Level 3 or
- other relevant qualifications, experience or skills as given in the entry conditions.

Progression from this pathway for those who have completed a Higher Apprenticeship in Engineering Environmental Technologies (Building Services Engineering):

- employment as a technician or manager in Environmental Technologies (Building Services Engineering) - see job roles identified
- this Apprenticeship provides excellent preparation towards professional registration as an Engineering Technician (Eng Tech)
- it may also, where appropriate, provide progression to a range of relevant honours degrees.

To further assist apprentices plan their careers we recommend they visit the following websites:

www.ucas.ac.uk/

www.engc.org.uk/

https://nationalcareersservice.direct.gov.uk/advice/planning/jobfamily/Pages/manufactureandengineering.aspx

UCAS points for this pathway:

N/A

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

Method 1 - Qualifications

1a. Excellence, Achievement and Learning Ltd. (EAL) have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:
EAL Level 2 Award in Employment Rights and Responsibilities for new Entrants into the Science, Engineering and Manufacturing Sectors (QCF)
QCF qualification ref no: 600/0290/6
Credit value: 5 credits

1b. Pearson have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements if Unit 2 is achieved.

Qualification details:
Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment (QCF) QCF qualification ref no: 501/1793/2
Credit value: 4 credits

Please note: The Pearson BTEC Level 2 Award consists of a mandatory unit as an introduction to apprenticeships. Apprentices must then complete Unit 2 which covers the ERR requirements (included within content). This qualification is designed to be assessed in the context of

the sector relevant to the apprenticeship framework being undertaken (i.e. Construction and the Built Environment, Manufacturing Engineering or Building Services Engineering)

1c. Cskills Awards have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:
Cskills Awards L1 Award in Employee Rights and Responsibilities (QCF) QCF qualification ref No: 600/5877/8
Credit value: 1 credit

1d. Pearson have produced two Level 3 stand alone qualifications that can cover all 9 outcomes of ERR requirements if Units 2 & 4 are achieved.

Qualification details:

Pearson BTEC Level 3 Award in WorkSkills for Effective Learning and Employment (QCF) QCF qualification ref No: 501/1791/9
Credit value: 4 credits

Qualification details:
Pearson BTEC Level 3 Diploma in Construction & the Built Environment (QCF)
QCF qualification ref No: 500/7137/3 (Unit 43 'Employability in the Built Environment' H/600/0344)
Credit value: 10 credits

1e. City & Guilds have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements

Qualification details:
City & Guilds Level 2 Subsidiary Award in Employment and Personal Learning at Work (QCF) QCF qualification ref no: 600/2819/1
Credit value: 2 credits

These qualifications will enable apprentices to both know and understand the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

Apprentices achieving the qualifications will have demonstrated

that they have the underpinning knowledge relevant for the Construction and the Built Environment, Building Services Engineering or the Manufacturing Engineering sector.

Method 2 - Workbook

Semta has produced an Apprentice ERR workbook that is available from: customercare@eal.org.uk

or

Construction Skills has produced an Apprentice ERR workbook/ training specification that is available from: http://www.citb.co.uk/qualifications-standards/apprentice-frameworks/apprenticeship-frameworks-england/

The requirements for completing it must be explained to the apprentice right at the start of their training in order that they may take full advantage of their *company induction where significant amounts of information towards the national outcomes will be covered. The workbook is intended to enable apprentices to know, understand and record the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

***Please note:** All apprentices must receive a company induction programme.

To claim final certification of the apprenticeship, one of the preceding forms of ERR evidence will be required, together with the ACW Universal Apprentice Certificate Claim form which is available from the Federation for Industry Sector Skills and Standards (Fisss) website: acwcerts.co.uk/

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

How equality and diversity will be met

Semta, Cskills/CITB and Summitskills recognise the training and business benefits of having apprentices from a wide variety of diverse backgrounds. We are all committed to ensuring equality and diversity drives all aspects of apprentice selection and recruitment.

Equal opportunity and diversity refers to the active elimination of unlawful or unfair discrimination against any person or group on the grounds of gender, race, colour, nationality, ethnic origin, religion, age, sexual orientation, marriage and civil partnership, pregnancy and maternity, political belief, disability and where appropriate, prison/offender background where this is deemed irrelevant.

Despite the encouraging numbers of both female participants and ethnic minorities on the 14 to 19 Engineering and Young Apprenticeship programmes, the Engineering sectors associated with engineering environmental technologies still have a significant way to go to encourage women into engineering careers, although the proportion of female Engineering apprentices more than doubled between 2009/10 and 2011/12 to 9 per cent.

Semta wishes to make a Gender Equality Commitment. Semta has signed the United Kingdom Resource Centre (UKRC) CEO's charter in a bid to step up female recruitment in its key sectors and programmes.

The UKRC is the Government's leading body for advanced gender equality in science, engineering and technology (SET) and the CEO's charter is a formal commitment to the UKRC's agenda to challenge the under-representation of women in SET. Women make up 50% of the labour market, yet they make up less than 20% of the labour market in science, engineering and technology.

Summitskills have identified that the nature of the work means that the building services engineering sector is not a traditional career choice for women, but women do qualify and work successfully in the industry and this is encouraged. "We are continuing to work with the UK Resource Centre for Women in Science, Engineering and Technology and Platform 51 (formerly the YWCA) to promote the opportunities for women working in the building services engineering sector".

CITB as a partner organisation of the Sector Skills Council for the construction industry and an Industry Training Board encourage construction companies to employ the best qualified person for the job regardless of age, disability, gender-reassignment, marriage or civil partnership, pregnancy and maternity, race, religion and belief, sex (gender), sexual orientation or socio-economic background. We will also challenge out-of-date practices and promote equality and the business case for diversity to construction companies by working with our partners and government.

Providers of apprenticeship training including employers must be able to demonstrate there are no overt or covert discriminatory practices in the selection and employment of apprentices this can be demonstrated by the implementing of a Single Equality Scheme (SES). The new Equality Duty (part of the Single Equality Bill) introduced to the public sector requires all public sector bodies to produce a SES combining their current race, disability and gender schemes and should be recognised by all providers of apprenticeship training. The implementation of a SES demonstrates the organisation's commitment to equality and diversity by identifying new and improved ways of working to ensure the organisation is more efficient and effective in meeting the diverse needs of both staff and customers.

All those who recruit apprentices, be they colleges, training providers or employers, must comply with the Equality act of 2010 and apply the Equality and Diversity legislation taking full account of the following:

- The Sex Discrimination Act 1975 and Code of Practice
- The Race Relations Act 1976 and Code of Practice
- The Disability Discrimination Act 1995 and Code of Practice
- Employment Equality (Religion or Belief) Regulations 2003
- Employment Equality (Sexual Orientation) Regulations 2003
- Employment Equality (Age) Regulations 2006
- The Equality Act 2010

Providers of apprenticeship training and employers must also actively monitor equality of opportunity and diversity procedures and take positive action where necessary to ensure equal access and treatment for all. Apprenticeships must be seen as a vital route to encourage and facilitate long term change in the equality and diversity of the engineering, construction, and building services industries, therefore entry conditions into this framework are extremely flexible. All effort should be made to increase the diversity of our apprentice population.

Download the guidance on the Equality Act here:

www.equalityhumanrights.com/advice-and-guidance/new-equality-act-guidance/

Semta, Cskills/CITB and Summitskills will monitor take up and achievement through the Higher Apprenticeship Steering Group and take steps to address any barriers to take up and achievement.

On and off the job training

Summary of on- and off-the-job training

For the Apprenticeship, the hours outlined in the pathways may vary depending on previous experience and attainment of the apprentice. Where a learner enters an apprenticeship agreement having previously attained or acquired some or all of the appropriate competence or knowledge, this prior learning needs to be recognised and documented using the relevant QCF credit transfer, QCF exemption or Recognition of Prior Learning (RPL) procedures.

The amount of 'on-the-job' training required to complete the apprenticeship under the apprenticeship agreement may then be reduced accordingly, provided the total numbers of' on-the-job' hours for this framework can be verified for apprenticeship certification. Those 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 5% or more hours towards the 'on-the-job' framework total through prior learning acquired from previous full-time education, employment or other vocational programme, then the apprentice's learning programme should include "customisation".

Training providers and colleges 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 Unit(s) from QCF qualifications, or relevant units recognised as Quality Assured Lifelong Learning (QALL) through a CQFW recognised body, or follow Essential Skills at a level higher than that specified in the framework, including one or more Wider Key Skills or other competency-based qualifications/units relevant to the workplace.

Note
The Higher Apprenticeship framework for Engineering Environmental Technologies primarily addresses the training needs of apprentices involved in Construction and the Built Environment, Manufacturing Engineering and Building Services Engineering. Having discussed the requirement for Essential Skills Wales, it was felt that all three qualifications would be required for a framework at this level. For an apprentice who has already achieved the relevant qualification, they must have been certificated within 5 years from the date of application for the Higher Apprenticeship Certificate.

Any off-the-job training undertaken before the apprentice started may count towards the off-the-job training required for the apprenticeship if it was undertaken in relation to an accredited qualification contained in the framework for which an apprenticeship certificate is applied for. Both on and off-the-job training hours need to be planned, reviewed and jointly evaluated between the apprentice, training instructor, tutor or lecturer and workplace supervisor and where relevant the apprentices's mentor. The apprentice should have access to training support at all times whether carrying out on or off-the job training.

On and off-the job training hours should be delivered through a variety of learning methods, individual and group teaching; team-working; e-learning; distance learning; coaching; mentoring; feedback and assessment.

The minimum training hours and credit value for each pathway are summarised in the pathway descriptions.

Evidence requirements for claiming an Apprenticeship Certificate
FISSS (The Federation of Industry Sector Skills & Standards), who were formerly known as The Alliance of Sector Skills Councils, have recently been appointed as the certificating authority for Welsh Apprenticeships. FISSS have developed a new online system called ACW (Apprenticeship Certification Wales) for Welsh Apprenticeship certification which will superseded the paper based system from 2nd September 2013 onwards. This means that all Apprenticeship completion certificates must be claimed via the new ACW online system from this date onwards.

If you are a Training Provider claiming an Apprenticeship completion certificate on behalf of an apprentice then you will need to register on ACW for a user name and password before you are able to register apprentices and claim certification.

If you are an apprentice claiming an Apprenticeship completion certificate for yourself then you will need to go to the ACW for an application form.

If you are an apprentice claiming an Apprenticeship completion certificate for yourself then you will need to go to the ACW for an application form.

Off-the-job training

The minimum training hours for each pathway are summarised in the pathway descriptions.

How this requirement will be met

Off-the-job training needs to:

-achieve clear and specific outcomes which contribute directly to the successful achievement of the framework and this may include accredited and non-accredited elements of the framework

-be planned, reviewed and evaluated jointly between the apprentice and a tutor, teacher, mentor or manager

-allow the apprentice access as, and when required to tutors, teachers, mentor(s) or manager

-be delivered through one or more of the following methods: individual and group tutoring, e-learning, distance learning, coaching, mentoring, feedback and assessment, collaborative/networked learning with peers or directed study.

Providers will not be required to record individual on and off-the-job training hours. However for certification purposes, the provider will be required to declare that the apprentice has completed the on and off-the-job training hours requirement as set out in this Apprenticeship framework.

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 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 apprentices who have already achieved the relevant qualifications, they must have been certificated within 5 years of applying for the Higher 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 apprentices with prior uncertificated learning experience, they must have been continuously employed in the relevant job role in the industry for five years duration.

Essential Skills Wales/ Essential Skills Qualifications (ESQ) delivery methods may vary, however all methods should start with initial/early assessment of a learner's skills, personalised learning should be based on assessing performance to date in order to inform and shape the next step in learning for that individual or group of individuals. Essential Skills Wales/ Essential Skills Qualifications (ESQ) are externally assessed and candidates need to be prepared in order to take the tests, again methods of preparation vary but the preferred method seems to be an intensive off-the-job coaching period where candidates are taught the techniques required to undertake previous test papers to become proficient.

Employee Rights and Responsibilities (ERR) will be delivered as per the guidance in the ERR section of this framework. It is important that all new apprentices receive a comprehensive induction programme on joining their company and that they are aware of the evidence opportunities this presents to complete significant areas of the ERR requirements.

All three key elements (along with Wider Key Skills Wales) will be delivered by a combination of group-based delivery and self-study. In addition there will be a company induction, and it is recommended that a mentor should be appointed for each apprentice to review their progress on a regular weekly basis. All of these activities will take place off-the-job.

Foundation Degrees
The Foundation Degree in this Framework has been supported by employers. It also meets the guidance relating to the minimum credit values for the Higher Education Credit Framework for Wales. The number of hours required to complete the qualification will vary significantly depending on a number of factors including the academic starting point of the apprentice, the units/modules selected and the bespoke delivery and assessment model agreed between the education institution and the employer. Whilst this framework document has specified the number Credit Accumulation and Transfer System (CATS) credits, it is also understood that many of the Higher Education qualifications included conform to the European Credit Transfer and Accumulation System (ECTS) where 5 ECTS credits are equivalent to 10 CATS credits. In the qualifications section of the framework document we have included the Awarding University. In many cases the delivery of the Foundation Degree will be franchised out to one or more Colleges of Further Education. Please contact the relevant Awarding University for details of delivery locations.

Off-the-job training
It is recommended that a mentor is appointed for each apprentice to review their progress on a regular basis and all apprentices are entitled to receive at least one hour a week mentoring and this is included in the off-the-job training hours. It is recommended that a mentor may well exceed this one hour per week contact time as and when required with the higher apprentice. This activity will take place off-the-job and is inclusive within the off-the-job hours quoted in the previous section.

Evidence of off-the-job hours and off-the-job training must be formally recorded, either in a diary, workbook, portfolio or be verified by attendance records. This evidence needs to be checked and signed by the assessor and employer.

Evidence of off-the-job training
The range of evidence requirements are as follows:

-Copy of Awarding Organisation certificates for Communication and Application of Number (Essential Skills Wales) or Key skills at the same level as Essential Skills Wales or the new Essential Skills Qualifications (ESQ)*
-Copy of Awarding Organisation certificates for the IOLP and WWO (Wider Key Skills Wales)
-Copy of the Awarding Organisation certificate for the ERR qualification or completed countersigned ERR workbook
-Copy of the Awarding Organisation certificate for the knowledge qualification

***Note:**
Please be aware that from 1st September 2015 the new Essential Skills Qualifications (ESQ) will be available. Any apprentices registered on a SASW Apprenticeship **on or after 1st January 2016 must undertake** the required mandatory ESQ's in Communication Skills and Application of Number Skills (at the level specified in the framework). Please also note that some frameworks may also require Essential Digital Literacy Skills to be achieved.

Also as from 1st September 2015 there will be new GCSE's with ESQ content that may be considered as proxies in the future, this will be confirmed at a later date by the Welsh Government and Qualifications Wales.

The Welsh Baccalaureate Qualification (WBQ) is also changing later this year and the certification will include the ESQ and GCSE's components. Candidates undertaking the new WBQ will not be required to provide individual certificates as evidence.

Proposed changes in 2016 include a new set of ESQ qualifications: Essential Communication Skills, Essential Application of Number Skills, and Essential Digital Literacy Skills. Learners who have enrolled prior to 31st December 2015 can continue to work towards either Key Skills / Essential Skills Wales (AON, Comms, and ICT / Digital Literacy) which will be accepted within SASW.

On-the-job training

Refer to each pathway description for a summary of the minimum on-the-job training hours

Occupational Competence Qualifications - on-the-job training.

Again working closely with employers across the Construction and the Built Environment, Manufacturing Engineering and Building Services Engineering sectors, ensures that the competence qualifications included in the Framework are flexible enough through a core and options approach, to be able to encompass a wide range of occupational areas that have been requested by employers and articulated in the Framework pathways.

As well as a range of technical options the qualifications may also include a number of generic competencies covering areas such as:

Problem Solving
- Implementing Change
- Supporting Team Members
- Developing Working Relationships
- Supporting Learning and Development
- Managing processes, systems and/or people

The benefits to the employer and apprentice of having access to range of occupational competence unit options linked to a broad selection of technical knowledge and understanding qualifications is that they can:

• select the most appropriate balance and mix of technical units along with generic and transferable knowledge and understanding units that meet the requirements of thebusiness, the relevant job role and the apprentice's current capabilities, learning styles and career aspirations

• design a bespoke work place training and development plan to ensure that the apprentice: o gains a broad understanding of business processes and theoretical concepts
o has the opportunity to apply the knowledge and understanding in the workplace
o develops a good understanding of their workplace including people, products, processes and procedures
o is able to acquire the relevant job role competencies in order to ensure a smooth transition into the working environment on completion of the apprenticeship programme
o has the potential for career progression and access to further /higher education programmes.

How this requirement will be met

The recommended on-the-job hours are described in each pathway description. On-the-job training hours should:

- achieve clear and specific outcomes which contribute directly to the successful achievement of the framework and this may include accredited and non-accredited elements of the framework
- 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.

Examples of on-the-job training hours in an engineering environmental technologies context might be:

- environmental awareness
-

employability skills
- team working and communications
- task-specific workplace instructions or team briefings
- taught sessions by the workplace line manager/instructor
- induction where activities are covered within normal work duties
- coaching of learners

Providers will not be required to record individual on the job training hours. However for certification purposes, the provider will be required to declare that the apprentice has completed the on-the-job training hour requirement as set out in this Higher Apprenticeship framework.

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.

For apprentices who have already achieved the relevant qualifications, they must have been continuously employed in the industry for 5 years. Job roles within the Construction and the Built Environment, Manufacturing Engineering or Building Services Engineering Industry require a thorough level of technical competence and knowledge, which will be undertaken through work-based training, practice and experience**.**

All apprentices are required to generate evidence in the work place to demonstrate completion of the competence qualification, this may be through:

- apprentices generating a portfolio to record evidence of unit completion in accordance with the awarding organisation's requirements and this will be regularly reviewed by the assessor and mentor. A period of one hour per week has been set aside for mentors to review the ongoing progress of their apprentice

or

- apprentices generating portfolio evidence based on jobs undertaken will need to get this signed as having been completed by a responsible work colleague. This is then examined and agreed by the assessor as a contribution to demonstrating competence in the workplace.

Generation of portfolio evidence may be paper based, electronic with other mediums such as video evidence. Evidence may be gathered throughout the whole apprenticeship period

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 following qualifications:

Enter Qualification Names

Improving own learning and performance

Improving own Learning and Performance is an essential component of this Higher Apprenticeship in Engineering Environmental Technologies at Level 4.

The requirement is at Level 2.

Working with others

Working with Others is an essential component of this Higher Apprenticeship in Engineering Environmental Technologies at Level 4.

The requirement is at Level 2.

Problem solving

Although the ability to problem solve is required in many engineering processes, it is dealt with 'on-the-job' within the NVQ and technical certificate rather than in the abstract. Therefore problem solving problem solving does not form a specific part of the Wider Key requirements for this framework. However, apprentices are encouraged to gather evidence of this skill during their apprenticeship, should they they wish to claim this at a later date.

apprenticeship
FRAMEWORK

For more information visit-
www.acwcerts.co.uk/framework_library