Skills Development Scotland



SAAB | Scottish Apprenticeship Advisory Board

Modern Apprenticeship in The Water Industry at SCQF Level 6

1 Overview

This apprenticeships has been designed to support the development of apprentices working in the Water Industry, offering three pathways in specialist occupations:

- Controlling Process Operations, Designing Water Networks and Network Construction Operations (Water).

The goal of this apprenticeship is to develop competence and the range of knowledge, experience and skills required to perform and deliver within the chosen pathway.

Duration

The expected completion time for this apprenticeship is 3 years.

Level

SCQF Level 6. More information on SCQF can be found **here**.

Qualification achieved

Apprentices will achieve one of the following qualifications:

- SVQ in Controlling Process Operations at SCQF Level 6 (GNFB 23)
- SVQ in Designing Water Networks at SCQF Level 6 (G7MO 23)
- SVQ in Network Construction Operations (Water) at SCQF Level 6 (GR6Q 23)

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Introduction

Apprenticeships aim to provide a mixture of on-the-job (in the workplace) and off-the-job (through day or block-release) learning to enable people to develop the knowledge, skills and expertise required by businesses today.

Designed by employers to attract new talent, tackle critical skills shortages and develop existing workforces, apprenticeships can both help people to enter the world of work and develop the skills of those already in work

About Scottish Apprenticeships

Scottish Apprenticeships are for everyone and reflect the Government's commitment to promoting a world-class, inclusive, work-based learning system. They are administered by **Skills Development Scotland,** the National Skills Agency. Skills Development Scotland has a remit to contribute to the nation's economic growth and it does this by supporting individuals and businesses alike to develop and apply their skills in the workplace.

The Scottish Apprenticeship system focuses on three specific key elements:

- the **learning outcomes** aligned to the specific work situations of an apprentice's job;
- the **knowledge, skills and behaviours** that will be developed by apprentices, enabling them to work competently and confidently;

  and
- the **meta-skills** that will be developed by apprentices to help them to manage themselves, collaborate with others and interact with change.

Throughout their apprenticeship, apprentices will be supported and guided by their employer, mentor and learning provider, and will have their growing competence measured by an assessor to ensure they can perform their job to the standard required. On successful completion, apprentices will be awarded nationally recognised competence-based and/or professional qualifications in their chosen field.

About this standard and framework document

Working in partnership with businesses and stakeholders, this standard and framework document has been written to provide apprentices and employers with an overview of the key features of this apprenticeship.

Find further information on apprenticeships here!

The Water Industry Pathways

This apprenticeship is designed to support apprentices within the Water Industry and contains four specialist occupational pathways in Controlling Process Operations, Designing Water Networks and Network Construction Operations (Water).

Each pathway will provide apprentices with the skills and knowledge required to become competent in their chosen job role and includes a balance of technical, business and interpersonal skills areas, designed to ensure apprentices have an appropriate set of skills to operate in today's Water Industry.

The Water Industry
Modern Apprenticeship
SCQF Level 6

- Controlling Process Operations
- Designing Water Networks
- Network Construction Operations (Water)

Click on the specialist pathway you would like to learn more about!

Controlling Process Operations

This apprenticeship is designed to support the development of individuals who are interested in pursuing a career in Controlling Process Operations roles in the Water Industry.

This pathway will provide apprentices with the skills and knowledge required to become competent in their chosen job role and includes a balance of technical, business and interpersonal skills areas, designed to ensure apprentices have an appropriate set of skills to operate competently in today's Water Industry.

Apprentices will be expected to achieve the following **core learning outcomes** by the end of their apprenticeship.

- Make sure your own actions reduce risks to health and safety
- Conduct health and safety risk assessment of a workplace
- Work with colleagues, suppliers, contractors and stakeholders in the utilities sector
- Set, operate and monitor plant and equipment to process water, wastewater or sludge
- Monitor and maintain the quality of treatment process outputs

In addition, apprentices are expected to achieve **one** of the following **optional learning outcomes.**

- Receive and store sludge for processing
- Carry out repair and maintenance of treatment processing plant and equipment
- Plan and supervise repair and maintenance of treatment processing plant and equipment
- Receive, store and handle processing chemicals, reagents and other consumables
- Balance water treatment production with network demand in water processing plants
- Respond to treatment plant operational emergencies
- Ensure your own actions aim to protect the environment when working in the utilities sector

Controlling Process Operations

This apprenticeship is designed to develop apprentices' careers by developing their knowledge and understanding of their role, by increasing their skills and by enhancing their behaviours.

Employers across the sector have helped to identify the key knowledge, skills and behaviours that apprentices working in the Water Industry need to develop. Throughout their apprenticeship, apprentices should be regularly assessed to ensure they can demonstrate both know-how and ability in their chosen pathway, a high-level summary is provided below.

The knowledge, skills and behaviours below are common to the Controlling Process Operations pathway.

Knowledge

- Health, safety, environmental and regulatory requirements
- Risk assessment and safe systems of work
- Treatment process operations and control principles
- Water, wastewater and sludge treatment processes and technologies
- Process monitoring, performance and optimisation requirements
- Plant, equipment and maintenance requirements
- Communication, stakeholder and organisational requirements
- Quality assurance, sampling and process compliance requirements

Skills

- Planning and organising work activities
- Conducting and reviewing workplace risk assessments
- Implementing and monitoring safe working practices
- Operating and monitoring treatment plant and equipment
- Monitoring and maintaining treatment process performance
- Analysing operational data and making process adjustments
- Maintaining process quality and regulatory compliance
- Communicating and working effectively with customers and stakeholders

Behaviours

- Safety conscious
- Professional
- Responsible and accountable
- Attentive to detail
- Organised
- Collaborative
- Adaptable
- Solution-focused

Designing Water Networks

This apprenticeship is designed to support the development of individuals who are interested in pursuing a career in Designing Water Networks roles in the Water Industry.

This pathway will provide apprentices with the skills and knowledge required to become competent in their chosen job role and includes a balance of technical, business and interpersonal skills areas, designed to ensure apprentices have an appropriate set of skills to operate competently in today's Water Industry.

Apprentices will be expected to achieve the following **core learning outcomes** by the end of their apprenticeship.

- Develop utility network design briefs
- Create design options for utility networks
- Evaluate designs for utility networks
- Complete designs for utility networks
- Work with colleagues, suppliers, contractors and stakeholders in the utilities sector
- Work in an efficient and effective way in the utilities sector

Designing Water Networks

HOME

This apprenticeship is designed to develop apprentices' careers by developing their knowledge and understanding of their role, by increasing their skills and by enhancing their behaviours.

Employers across the sector have helped to identify the key knowledge, skills and behaviours that apprentices working in the Water Industry need to develop. Throughout their apprenticeship, apprentices should be regularly assessed to ensure they can demonstrate both know-how and ability in their chosen pathway, a high-level summary is provided below.

The knowledge, skills and behaviours below are common to the Designing Water Networks pathway.

Knowledge

- Health, safety, environmental and regulatory requirements
- Risk assessment and design evaluation principles
- Industry standards, specifications and organisational requirements
- Utility network engineering principles and design processes
- Design briefs, feasibility analysis and option development processes
- Design methods, software and modelling techniques
- Communication, customer and stakeholder requirements

Skills

- Planning and organising work activities
- Analysing technical information and design requirements
- Developing utility network design briefs
- Creating and presenting design options
- Producing utility network designs using industry software and tools
- Carrying out design calculations and technical assessments
- Evaluating and improving design solutions
- Communicating and working effectively with stakeholders

Behaviours

- Professional
- Responsible and accountable
- Attentive to detail
- Organised
- Collaborative
- Analytical
- Adaptable
- Solution-focused

Network Construction Operations (Water)

HOME

This apprenticeship is designed to support the development of individuals who are interested in pursuing a career in Network Construction Operations roles in the Water Industry.

This pathway will provide apprentices with the skills and knowledge required to become competent in their chosen job role and includes a balance of technical, business and interpersonal skills areas, designed to ensure apprentices have an appropriate set of skills to operate competently in today's Water Industry.

Apprentices will be expected to achieve the following **core learning outcomes** by the end of their apprenticeship.

- Conduct health and safety risk assessments of a workplace
- Plan utility network construction operations
- Make sure your own actions reduce risks to health and safety
- Locate and avoid supply apparatus for utilities network construction
- Monitor safety for site staff, the public, plants and vehicles
- Monitor the implementation of work activities for network construction operations: highway excavations
- Monitor the implementation of work activities for network construction operations: installations
- Use information to take effective decisions

In addition, apprentices are expected to achieve **three** of the following **optional learning outcomes.**

- Contribute to controlling work quantities and costs
- Control delivery of utility network activities against operational plants and quality requirements
- Transfer control of completed utilities network projects
- Work with colleagues, suppliers, contractors and stakeholders in the utilities sector.
- Commission and decommission water networks
- Communicate with customers in the utilities sector
- Mentor individuals

Network Construction Operations (Water)

HOME

This apprenticeship is designed to develop apprentices' careers by developing their knowledge and understanding of their role, by increasing their skills and by enhancing their behaviours.

Employers across the sector have helped to identify the key knowledge, skills and behaviours that apprentices working in the Water Industry need to develop. Throughout their apprenticeship, apprentices should be regularly assessed to ensure they can demonstrate both know-how and ability in their chosen pathway, a high-level summary is provided below.

The knowledge, skills and behaviours beloware common to the Network Construction Operations (Water) pathway.

Knowledge

- Health, safety, environmental and water quality requirements
- Risk assessment and safe systems of and emergency procedures
- Water network construction methods and operational processes
- Utility apparatus identification, location, and protection
- Technical specifications, quality standards and regulatory requirements
- Resource, equipment and materials requirements
- Communication, customer service and stakeholder requirements
- Organisational procedures, information systems and reporting requirements

Skills

- Planning and coordinating network construction activities
- Conducting risk assessments
- Implementing and monitoring safe working practices
- Locating, marking and protecting utility apparatus
- Monitoring network excavation, installation and construction activities
- Monitoring quality, progress and compliance
- Analysing information and making effective decisions
- Communicating and working effectively with customers and stakeholders

Behaviours

- Safety conscious
- Professional
- Responsible and accountable
- Attentive to detail
- Organised and reliable
- Collaborative
- Adaptable and improvement focused
- Solution-focused

Defining Meta-skills

Meta-skills are a key component of every Scottish apprenticeship framework. They sit alongside and complement occupational/technical knowledge, skills and behaviours. **As technology, society and the way we work change at an ever-increasing pace, so meta-skills are the over-arching and future-focused attributes that enable other skills to be developed through consideration, reflection and implementation.** Meta-skills support improved performance and productivity in the workplace enabling greater adaptability and resilience to change. For apprentices, meta-skills are a critical asset, supporting their ability to cope and excel in the face of change, to solve problems, to collaborate with others and to create successful futures.

Meta-skills are grouped into three complementary broad categories: **self-management** (focus, integrity, adapting initiative), **social intelligence** (communication, empathy, collaboration, leading), and **innovation** (curiosity, creativity, sense-making, critical thinking).



Meta-skills are developed by all apprentices and are consistently supported across every apprenticeship and quality assured against clearly set-out requirements as detailed in the Guidance for Meta-skills delivery in the Modern Apprenticeship Programme strengthening the credibility and readiness of apprentices, building their confidence, employability, and reinforcing the value of meta-skills within the apprenticeship. The apprenticeship certificate formally recognises employer-endorsed meta-skill development upon achievement of the apprenticeship.

Developing Meta-skills in The Water Industry

Self Management

A clear **Focus** is required for observing data inconsistencies and monitoring; **Integrity** is essential when maintaining truthfulness and honesty regarding problems and issues that occur to ensure efficient resolution. **Initiative** plays a key role wehn suggesting improvements to the process once familiar with the operations at a site; and **Adaptibility** is critical during call-outs and new, constantly changing site situations.

Social Intelligence

Clear and effective **Communicating** is vital for sharing updates on sites through online or face-to-face communication; **Collaboration** is essential for sharing workload and knowledge with colleagues to complete joint projects; strong **Interpersonal Awareness and Empathy** are required when actively contributing to creating a supportive environment among co-workers, skills in **Leadership** are demonstrated through leading by example in everyday daily tasks.

Innovation

Curiosity is important for learning new processes on sites, how they work and learning the theory and equipment within the role; **Creativity** supports innovation when providing feedback on ways the existing infrastructure can be consistently improved for issues like population increase. **Sense Making** is critical for ensuring a clear understanding of reports and cross-referencing against the correct criteria; **Critical Thinking** underpins effective problem solving, scheduling and resolving process issues on site.

Key roles and responsibilities

A number of different parties will be involved in the delivery, management and assessment of a successful apprenticeship. As well as the apprentice, key roles include employer, mentor, learning provider and assessor. Each has a specific set of responsibilities during the apprenticeship.

Apprentice Responsibilities

In their day-to-day roles, apprentices have the same responsibilities to their employer as any other employee but they have additional and specific responsibilities for their own learning and development too.

- Agreeing a learning/ development plan with all parties involved and following it through
- Committing to learning throughout the duration of apprenticeship
- Participating in progress meetings with employer and learning provider representatives
- Participating in off-the-job learning where required
- Reflecting on performance and on development of skills, knowledge and behaviours required of the role
- Agreeing new goals to progress learning with all parties involved

Employer Responsibilities

- Providing apprentices with a contract of employment, a job description and an induction Programme
- Paying apprentices in line with company policy, current legislation, fair work principles, and equality and diversity expectations
- Ensuring a working environment that is free from discrimination, bullying and harassment
- Agreeing learning needs and a learning and development plan with the learning provider and apprentices including
    - agreeing when off-the-job learning will be required and releasing apprentices for this as required
    - making on-the-job learning arrangements
    - identifying additional support requirements and agreeing actions to implement these
- Providing a quality work-based learning environment for apprentices, including the facilities and training necessary to demonstrate competence and succeed in the apprenticeship
- Providing the support of a mentor, who has relevant industry experience and is familiar with the employer's business, to support apprentices' development
- Contributing to the ongoing assessment of occupational competence, including observing performance, verifying evidence and profiling meta-skills
- Meeting with apprentices and learning providers to review apprentices' progress and set future goals
- Providing an environment that supports apprentices to take responsibility for their own learning and development
- Supporting and encouraging apprentices during their apprenticeship
- Recognising the achievements of apprentices in career management and progression
- Providing constructive feedback to the learning provider on the quality of their service delivery to inform continuous improvement of both the Scottish Apprenticeships system and apprentices themselves

Key roles and responsibilities

Mentor Responsibilities

- Helping new apprentices orientate into the workplace
- Providing information, advice and guidance relating to the learning and assessment aspects of the apprenticeship
- Supporting apprentices to define meta-skills in their shared work context
- Working with apprentices, employers and learning providers to ensure problems are resolved quickly
- Acting as an expert witness for apprentices
- Providing support to apprentices as they adjust to the workplace and progress in their career

Learning Provider Responsibilities

- Providing an appropriate apprenticeship programme for apprentices and employers
- Agreeing the learning needs of the apprentices with both the apprentice and the employer
- Agreeing when off-the-job learning will be required and defining roles and responsibilities for this with relevant parties
- Ensuring apprentices have access to the best quality learning opportunities available
- Ensuring apprentices and employers fully understand the principles and processes of competence-based assessment
- Registering apprentices through MA Online and with relevant awarding bodies, sector skills organisations and Skills Development Scotland as appropriate
- Compiling and agreeing learning and development plans and assessment plans with apprentices and employers
- Completing assessment records and submitting records and evidence for verification/moderation
- Reviewing apprentices' progress at regular intervals with the employer
- Supporting apprentices to develop their reflective practice
- Advising apprentices who to approach for support, advice and encouragement both within and outwith the workplace
- Seeking and providing feedback from and to employers and apprentices to inform continuous improvement of the Scottish Apprenticeships system and apprentices themselves

Assessor Responsibilities

- Meeting with apprentices, mentors and employers to plan learning and review progress
- Monitoring apprentices' progress against learning and development plans
- Observing and assessing apprentices in the workplace and judging whether their work meets the competence requirements set by the qualification awarding body
- Assessing different types of evidence from apprentices
- Providing constructive feedback on performance and offering suggestions for improvement
- Maintaining current knowledge of industry standards and seeking innovative new methods of work-based learning delivery

Before the apprenticeship starts

The recruitment of apprentices is primarily the responsibility of the employer and, before an apprenticeship starts, consideration should be given to entry requirements and also to ensuring that the workplace adheres to fair work, inclusion and diversity principles.

There are no specific academic entry requirements for the SCQF Level 6 Modern Apprenticeship. However, applicants should be able to demonstrate an interest in the water industry, a commitment to health, safety and environmental responsibility, and the motivation to learn and develop new skills. Apprentices should be able to work effectively both independently and as part of a team, demonstrate reliability, adaptability, problem-solving ability and customer focus, and be comfortable using digital technologies in the workplace. Where required by their role, apprentices may also be expected to undertake National Water Hygiene training and comply with any health screening requirements necessary to obtain an EUSR National Water Hygiene Card for working on operational water assets.

Being open to alternative assessment methods and relevant experience, instead of qualifications, can help to broaden the pool of potential applicants. Consideration should be given to the use of existing employability options to support recruitment. Examples of these are available here.

Employers should consider existing workplace skills and experiences, where apprentices are either changing careers or upskilling. Being open to alternative assessment methods and relevant experience, instead of qualifications, can help to broaden the pool of potential applicants.

Other routes to entry can include:

- Local employability services Local Employability Services in Scotland

Recognition of Prior Learning

Individuals applying for an apprenticeship will undergo selection be accepted for entry onto the programme. based on the employer's existing HR processes. Learning providers should take account of this and liaise with employers to be accepted for entry onto the programme.

It is recommended that a flexible approach to RPL is adopted, on case-by-case basis, with all relevant experience as well as any previous qualifications considered. Learning providers should always consider how they can best recognise apprentices' prior learning to minimise repetition of content.

You can find more information on RPL here.

Apprenticeship agreement and employment status

All post-school apprentices must hold a contract of employment for the period of the apprenticeship.

In addition, an apprenticeship agreement, confirming the commitment of the employer, the apprentice and the learning provider to the agreed apprenticeship must be signed by all parties. This agreement forms part of the individual employment arrangements between the apprentice and the employer; and of the learning arrangements between the learning provider, the employer and the apprentice.

Registration and certification

Registration and certification of apprenticeships is undertaken through Modern Apprenticeship Online.

It is the responsibility of the learning provider to ensure that the registration of apprentices is completed within four weeks of the start of their apprenticeship.

Fair work, inclusion and diversity

The Scottish Apprenticeships system aims to embed fair work principles. Fair Work First is the Scottish Government's flagship policy for driving high quality and fair work across the labour market in Scotland by applying fair work criteria to grants, other funding and contracts being awarded by and across the public sector, where it is relevant to do so. Through this approach the Scottish Government is asking employers to adopt fair working practices, specifically:

- appropriate channels for effective voice, such as trade union recognition;
- investment in workforce development;
- no inappropriate use of zero hours contracts;
- action to tackle the gender pay gap and create a more diverse and inclusive workplace; and
- payment of at least the minimum Living Wage.

Further guidance on Fair Work First is available from here.

The design and development of Scottish Apprenticeships aims to embed these principles in practical ways by including opportunities for feedback from apprentices as well as the availability of clear pathways into future opportunities beyond the apprenticeship itself.

Protected characteristics

The Equality Act 2010 includes nine protected characteristics, which are age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, and sex and sexual orientation. It is against the law to discriminate based on these protected characteristics. Skills Development Scotland is a Corporate Parent and, to that end, includes 'care experienced' in a similar way to protected characteristics in all its funded programmes and services.

Attracting the best people into apprenticeships involves ensuring that barriers are removed. Receiving the right support at the right time unlocks the potential of people who could otherwise be denied the opportunity to go on and become valued employees. Supporting people to feel confident about disclosing their protected characteristics in a safe and respectful way allows employers and learning providers to put the right conditions in place to unlock that potential; the right time for this is often at the start of an apprenticeship or even at the recruitment stage. In practice, it might involve ensuring that reasonable adjustments are made to accommodate apprentices, where that is possible and to help them make the most of their apprenticeship journey. Examples might include (but are not limited to supporting people with sensory impairments, supporting people for whom English is not their first language and supporting people who are care experienced (for example, through fostering, adoption or residential care.

Diversity in the Water Industry

The Water Industry serves diverse communities and depends on attracting talent from all backgrounds. While progress is being made, women remain significantly under-represented in many operational, engineering and technical roles. Barriers to participation and progression can also be experienced by disabled people, neurodivergent people, care-experienced individuals, people from ethnic minority backgrounds, those with caring responsibilities and others who may face disadvantage in accessing employment and learning opportunities.

Water Industry Apprenticeships are committed to creating inclusive, accessible and welcoming pathways into skilled careers. Employers and training providers should ensure that recruitment, learning and workplace experiences are free from discrimination and actively support the diverse needs of apprentices. This includes making reasonable adjustments where required and fostering environments where everyone is treated with dignity, respect and fairness.

By widening participation and promoting equality, diversity and inclusion, the water industry can challenge occupational stereotypes, attract a broader range of talent, strengthen innovation and better reflect the communities it serves, helping to build a skilled and sustainable workforce for the future.

Employers and training providers should ensure that recruitment, learning and workplace experiences are free from discrimination, harassment and victimisation, and support the diverse needs of apprentices. This includes adopting inclusive recruitment practices and drawing on resources such as Skills Development Scotland's Inclusive Recruitment Guides to identify and remove potential barriers to participation.

Available Support for Apprentices

Everyone needs support from time to time. There are a number of readily available resources that can be accessed during the apprenticeship.

Mental wellbeing support for apprentices

Work can contribute positively to mental wellbeing by providing things such as friendships, meaningful activity and learning opportunities. However, sometimes work brings pressures which can either create or add to problems with mental health. When experiencing difficulties with mental health, work can sometimes feel like an additional pressure even if there are no direct issues at work. When working towards an apprenticeship, the challenges of combining studying for a qualification alongside work may at times add to those pressures. Skills Development Scotland, working in partnership with Penumbra, have developed a number of resources that aim to support apprentices in seeking help for mental health difficulties. More information is available from

https://www.apprenticeships.scot/become-an-apprentice/mentalhealth-resource

Fair working conditions

Working conditions should always be fair. Fair work is work that offers all individuals an effective voice, opportunity, security, fulfilment and respect. Find out more about fair work while you're working as an apprentice in Scotland from

https://www.apprenticeships.scot/support-during-apprenticeship/fairworking

Disability support

The Equality Act 2010 protects disabled people. Employers, colleges, universities or learning providers:

- Cannot treat an apprentice less favourably than others for any reason connected to a disability
- Must make reasonable adjustments to make sure apprentices are not seriously disadvantaged during the course

More information on the sources of disability support that is available to apprentices is available from

https://www.apprenticeships.scot/support-duringapprenticeship/disability-support

Money and funding

Apprenticeships allow an apprentice to work for an employer and earn a wage. More information on money or funding is available at

https://www.apprenticeships.scot/support-during-apprenticeship/money-and-funding

Support for care-experienced apprentices

Support is available for care-experienced apprentices. More information including insights from apprentices who have experience of the care system is available from

https://www.apprenticeships.scot/support-during

During the apprenticeship

Once the apprenticeship starts, there are a number of key considerations, tasks and milestones that apprentices, employers, learning providers, mentors and assessors should undertake to optimise a successful outcome for all parties.

Work-based Learning

Work-based learning – aligned to and assessed against both the **learning outcomes** and the **knowledge**, **skills and behaviours** of the apprenticeship – is the central and most significant component of an apprenticeship and is based on apprentices' real-life experiences in the workplace. Work-based learning is a partnership between apprentice, employer and learning provider and all apprentices must have the support of a mentor in the workplace.

Get more information on work-based learning here.

Meta-skills Development

This apprenticeship provides opportunities to develop Meta-skills. To effectively develop the Meta-skills outlined earlier, apprentices must first understand what they are and how they might apply them in their role. This will allow apprentices to consider their own Meta-skills and which ones they might need to develop or apply to perform well in the workplace. Setting development goals, action planning and regularly reflecting on progress will help apprentices to develop their Meta-skills. Naturally occurring opportunities to discuss and reflect on Meta-skills might include induction, performance reviews and career development sessions.

Delivery of Training

The majority of training undertaken in any apprenticeship is focused on skills developed in the workplace. However, in some apprenticeships there is a requirement for elements of structured formal taught learning/training to be delivered outside the normal workplace, for example, in a college or training centre which might include classroom and or development of skills in a workshop. We often describe this as "off-the-job" training.

There is no mandatory requirement for off-the-job formal taught learning in this apprenticeship, however, some employers may choose to deliver elements of training in a college or training centre to enhance the quality of the learning experience for their apprentices.

An initial assessment and learning plan should be developed at the outset with input from the apprentice, employer and the learning provider, to identify any additional needs and provide apprentices with the appropriate support or adaptations required to successfully complete their apprenticeship.

Approaches to Assessment

Apprentices are expected to provide evidence of meeting the learning outcomes and the knowledge, skills and behaviours required of this apprenticeship; also, evidence to demonstrate that they are competent in the workplace. It is important for apprentices to recognise how they have developed skills and understanding along the way, and where these still need to be developed.

Holistic Assessment
The holistic approach allows larger pieces of work to evidence a number of learning outcomes, rather than a piecemeal process of finding separate evidence for each outcome and/or its associated knowledge, skills and behaviours. Work-based projects or problem-based activities often provide the richest opportunities for holistic assessment. Assessment of the common learning outcomes will be done in parallel with assessment of technical skills.

Assessment should be undertaken both in a controlled environment and through work related activity depending on what is being assessed, however most assessment should take place in the workplace.

Quality assurance

Skills Development Scotland is responsible for making sure all funded learning is of high quality and benefits the apprentice. A quality assurance framework is in place to cover the delivery of work-based learning in an apprenticeship and is designed to demonstrate how effectively learning providers and employers support this by ensuring apprentices:

- Receive appropriate support and guidance to enable them to become successful apprentices and confident individuals;
- Receive quality learning and develop their skills to achieve their learning goals;
- Are treated with dignity and respect in a way that promotes equality and inclusion; and
- Work towards successful outcomes, leading to future employment or further appropriate career progression.

The relevant awarding and accreditation bodies will undertake the quality assurance of the assessment of competence-based and professional qualifications.

Assessment methods	Guidance
Evidence of prior learning	Previous course/qualification assessment and certification should be made available.
Multiple choice/short answer questions - online or paper-based	Completed at a centre or remotely. If delivered remotely online invigilation must be in place.
Observations via physical or virtual tests	Practical assessment and any oral reasoning. Virtual visits can help with evidencing infrequent or unseasonal activities.
Personal statements	Evidence of an apprentice's activities and progress, could be demonstrated via online blog which is kept up to date during the apprenticeship.
Portfolio of evidence	Photographs, videos, case studies.
Presentation	A brief oral presentation on a specific and relevant topic. This could be followed by oral questioning.
Product evidence	The output of Apprentice performance.
Professional discussion	A structured conversation between the Assessor and Apprentice, where the candidate is an active participant rather than simply responding to questions.
Realistic simulation via scenarios and/ or questionnaires	Where the achievement of valid and reliable assessment calls for evidence of performance under workplace conditions, but where it will be difficult and/or unsafe to assess through normal working practice.
Reflective account	An accurate description by the candidate of work they carried out (linked to performance evidence where possible) and/or their knowledge.
Witness testimony	From line managers and relevant others.

Qualification Requirements

Competence-based qualification

Through their apprenticeship, apprentices must complete one of the following qualifications.

- SVQ in Controlling Process Operations at SCQF Level 6 (GNFB 23)
- SVQ in Designing Water Networks at SCQF Level 6 (G7MO 23)
- SVQ in Network Construction Operations (Water) at SCQF Level 6 (GR6Q 23)

This qualification brings together the development and assessment of all the learning outcomes and knowledge, skills and behaviours required of the role in a single qualification. It includes meta-skills development and assessment, which are integrated with technical skills.

Other awards, qualifications or training programmes

There are no mandatory enhancements within this apprenticeship.

Optional outcomes

To continue the development of apprentices there is an opportunity to continue with their learning journey and assist development within the current role or preparation for other roles and encouragement should be given to supporting that development.

Examples include:

- HNC Water Operations at SCQF level 7
- PDA Water Operations: Drinking Water Process at SCQF level 7
- PDA Water Operations: Waste Water Process at SCQF level 7
- PDA Water Operations: Water Distribution and Water Utilisation at SCQF Level 7
- First Aid at Work at SCQF level 6
- Emergency First Aid at Work at SCQF level 6
- RQF Level 2 Award in working in low risk confined spaces
- RQF Level 2 Award in working in medium risk confined spaces
- RQF Level 2 Award in working in high risk confined spaces
- SCQF level 5 Award in manual handling principles and practice
- Water Operations: Waste Water Treatment Processes
- Water Operations: Materials and Components

Core Skills

Core Skills are broad transferable skills, which can be used in addition to Meta-skills, to help apprentices learn how to manage and adapt how they respond to a changing society.

The five Core Skills are: Communication, Numeracy, Information and Communication Technology, Problem Solving and Working with Others.

Core Skills at SCQF Level 5, with Numeracy at SCQF Level 4 and are embedded within this Framework therefore no separate certification is necessary.

Pathways and Progression

A successfully completed apprenticeship, including the achievement of competence-based and professional qualifications, opens the door to a number of opportunities for progression in both work and further learning.

Career advancement

The Water Industry Modern Apprenticeships provide clear and flexible progression opportunities, enabling apprentices to develop occupational competence, progress into increasingly responsible roles and continue their professional development throughout their careers. The frameworks have been designed to support both immediate workplace competence and long-term career advancement within Scotland's water industry.

SCQF Level 6 Modern Apprenticeship

This apprenticeship is designed for roles that require a range of technical knowledge, analytical thinking, design capability, or problem solving. These frameworks support occupations where individuals are required to understand treatment processes, water quality , public health and regulatory compliance supported by the need to interpret information, apply technical principles and make decisions that influence the planning, design or control of water and wastewater systems and processes.

Typical career opportunities may include:

- Water Treatment Operations roles
- Wastewater Treatment Operations
- Process Scientist
- Network Design and Planning roles
- Technical Support and Specialist roles
- Operational Team Coach and Leader development opportunities

Further study

Options for those wishing to pursue further professional learning and development include:

- Further vocational qualifications and specialist training relevant to the role including HNC in Water Operations

Professional Registration

Institute of Water: Membership offers UK water professionals, regardless of qualifications, experience, discipline or department, opportunities to broaden their knowledge, widen their network and develop within the sector.

Society for the Environment (SocEnv): Meets criteria for Entry-Level Environmentalist (ELEnv) application.

On completion of the apprenticeship individuals become eligible to apply for ELEnv, confirming that the necessary requirements have been met. To gain this status, applicants must also be a member of a professional body licensed by the SocEnv.

ELEnv is awarded for up to a maximum of three years, during which registrants are expected to progress, supported by their professional body, to a competency registration (REnvTech, REnvP, or CEnv).

Information & Guidance: The Water Industry - Modern Apprenticeship - SocEnv

Amendments

Version Number	Date	Description
Version 1	Approved at AAG 01/10/2026	New version of apprenticeship