

ST1404/V2

DRAFT APPRENTICESHIP ASSESSMENT PLAN FOR THE WATER INDUSTRY ASSET MAINTENANCE TECHNICIAN APPRENTICESHIP

APPRENTICESHIP REFERENCE NUMBER	LEVEL OF THIS APPRENTICESHIP	INTEGRATION
ST1404	3	None

Assessment Plan

[Edit assessment plan form](#)

Assessment details

Introduction

This Apprenticeship Assessment Plan (AAP) sets out the requirements for the assessment of the level 3 water industry asset maintenance technician apprenticeship. It should be read in conjunction with the General Requirements for Apprenticeship Assessment. Where there is conflict between this AAP and the General Requirements, this AAP takes precedence.

Assessment organisations must also comply with the relevant regulatory framework for apprenticeship assessment.

It is important that the assessment of apprentices is proportionate, valid, and provides reliable evidence of an apprentice's attainment of the relevant knowledge and skills. As such, assessment organisations must design assessments to ensure:

- employers have confidence that the apprentice has reached the expected performance standard
- apprentices are sufficiently secure in their knowledge and skills, so that they could demonstrate their competence in different contexts, for example, a different workplace

Assessment Outcomes

The assessment outcomes group and summarise the knowledge and skills that must be demonstrated in assessments. All assessment outcomes must be assessed.

Assessment organisations must ensure all the core assessment outcomes and the assessment outcomes for one of the following options are assessed for each apprentice:

- Option 1: Water industry asset maintenance technician - mechanical
- Option 2: Water industry asset maintenance technician – electrical
- Option 3: Water industry asset maintenance technician – instrumentation, control and automation

Knowledge and skills statements in **bold** are mandatory and must be assessed in every version of the assessment that is made available.

Knowledge and skills statements which offer opportunities to develop functional English and maths are identified with an asterisk.

Core Assessment Outcome	Mapping
AO1: Water Industry Regulation and Environmental Impact Works in line with water industry regulations and standards, applying understanding of regulators and stakeholders. Applies sustainability principles and environmental controls.	K1, K2, K9, K10 S1, S5
AO2: Health, Safety, Risk Management and Site Security Complies with health, safety, site security procedures and safe systems of work in compliance with industry regulations, standards and hygiene requirements.	K3, K4*, K5, K6, K7, K8*, K12, K16, K17 S4, S7, S15
AO3: Work Planning and Digital Documentation Plans maintenance tasks considering process safety. Uses data and information to support planning and applies continuous improvement techniques, suggesting improvements for asset and process optimisation.	K11, K18, K22* S2, S9*, S12
AO4: Communication, Teamworking and Continuous Development Communicates with colleagues and stakeholders using appropriate terminology, formats, and digital tools. Applies teamwork principles when coordinating activities, sharing information and contributing to an inclusive working environment. Carries out personal learning and development activities and records them accurately to support ongoing professional growth.	K15, K19, K20, K21* S8*, S10, S11, S13*, S14
AO5: Tools, Equipment and Resources Selects and uses tools, equipment, and identifies and organises resources to complete maintenance tasks.	K13*, K14* S3, S6
Option 1: Water industry asset maintenance technician - mechanical	Mapping
AO6: Mechanical Installation and Commissioning Installs, assembles and commissions mechanical systems and components in line with specifications and procedures.	K23*, K25, K27* S16, S17*, S20
AO7: Mechanical Maintenance, Repair and Fault Finding Decommissions and isolates equipment and performs mechanical maintenance, inspection, testing and	K24*, K26*, K28*, K29 S18*, S19, S21, S22, S23, S24, S25

repair on machinery and components. Uses diagnostic equipment and fault-finding techniques to identify issues and implement corrective actions.	
A08: Mechanical fabrication, machining and technical interpretation Uses fabrication, welding, machining, and bench-fitting techniques to repair mechanical components. Interprets technical drawings, specifications, and calculations to complete tasks.	K30, K31, K32*, K33* , K34* S26* , S27*, S28* , S29* , S30* , S31*
Option 2: Water industry asset maintenance technician – electrical	Mapping
A09: Electrical installation, commissioning, circuit modification and decommissioning Installs, commissions and decommissions electrical systems, cabling, and components in line with specifications and safe-working practices. Applies electrical principles to modify circuits in line with design requirements.	K35, K36, K37* , K42, K44, K48 S32, S35* , S38 , S40, S42
A010: Electrical maintenance, repair and fault finding Decommissions and isolates electrical equipment, conducts maintenance, inspection, testing, repair and fault-finding on electrical equipment and installations. Uses diagnostic tools and system information to identify faults and implement corrective actions.	K38, K41* , K45, K46 , S34, S36* , S37* , S39, S40, S44*
A011: Electrical control systems, telemetry and technical interpretation Uses control systems, basic telemetry, and electrical documentation to support maintenance activities. Applies electrical principles and mathematical techniques to support problem-solving.	K39*, K40*, K43*, K47* , K49* S33*, S41, S43
Option 3: Water industry asset maintenance technician – instrumentation, control and automation	Mapping
A012: ICA installation, configuration, commissioning and decommissioning Installs, commissions and decommissions ICA equipment and control-system components in line with specifications and operational requirements. Configures instrumentation and communication devices to support system functionality.	K50*, K51, K53* , K56, K57* , K65 S45*, S46, S47*, S49, S50, S58
A013: ICA maintenance, calibration and diagnostics	K52*, K55, K58* , K59 , K62

Isolates instrumentation and Performs calibration, inspection, testing, maintenance and diagnostic activities on ICA systems, instrumentation. Applies ICA principles and diagnostic information to identify issues, implement corrective actions and carry out functional testing.	S48*, S51, S52, S53*, S55, S57, S61, S62
AO14: ICA telemetry, data analysis and control system logic Configures telemetry systems and control logic to support system operation. Uses mathematical and engineering principles to produce control-system programs, interpret system behaviour and adjusts setting.	K54, K60*, K61, K63*, K65*, K66*, K67* S54*, S56*, S59*, S60*, S63*

Assessment requirements

Assessment organisations must set apprenticeship assessments. Assessment organisations should consider how technology and digital tools can support innovation and efficiency.

Assessment organisations must design apprenticeship assessments to include an **observation** or **simulation**.

Any additional assessment, or assessments, must be selected from the following list of methods, to ensure the assessment outcomes are met in full. Assessments available in the list may be used more than once:

- **interview**
- **portfolio**
- **written assessment**
- **question and answer**

Assessment organisations must have due regard to any relevant frameworks, standards, guidance or other documents that may be published by industry regulators, professional bodies, and other representative groups.

Apprentices may be assessed at any appropriate point during their apprenticeship programme.

Assessments may be designed to allow a centre or training provider to mark assessments. The assessment organisation is responsible for ensuring all assessments are sufficiently reliable and valid, and for the accuracy of any centre or training provider marking.

Performance descriptors

Performance descriptors describe the level of performance required to achieve a pass or distinction grade. Assessment organisations must design assessments that align with these descriptions.

Performance Category	Pass	Distinction
Applied Knowledge	Demonstrates sound application of water-industry asset knowledge, facts,	Applies a thorough understanding of water-industry asset knowledge, facts, procedures, and ideas

	procedures, and ideas across routine and non-routine tasks, completing them to an acceptable standard within familiar but sometimes complex work contexts.	to manage and resolve routine and non-routine tasks with discernment and skill, confidently operating within familiar but sometimes complex work contexts.
Applied Skills	Identifies and applies appropriate water-industry asset skills, methods, and procedures to complete tasks and address challenges with a reasonable degree of autonomy and effectiveness across routine and non-routine activities.	Selects and integrates appropriate water-industry asset skills, methods, and procedures proactively and resourcefully to complete tasks and address challenges effectively and with minimal oversight, including in routine and non-routine activities.
Regulatory and Procedural Awareness	Applies water-industry asset legislation, regulation, and organisational procedures relevant to the role without error, with some depth of insight and adaptability across routine and non-routine tasks	Demonstrates refined judgement in interpreting water-industry asset legislation, regulation, and organisational procedures, confidently navigating nuanced issues in practice across routine and non-routine tasks.
Communication and Collaboration	Participates effectively in team environments and demonstrates clear water-industry asset communication when coordinating activities with colleagues and stakeholders to support daily service delivery.	Communicates persuasively and adapts confidently to different audiences and team dynamics, taking initiative in delivering effective colleague and stakeholder interactions that support daily service delivery.
Information Use and Decision Making	Accurately interprets and evaluates relevant	Evaluates diverse and sometimes conflicting water-industry asset information

	water-industry asset information from a variety of sources to support problem-solving in mostly familiar but sometimes complex work contexts.	sources with insight, drawing informed conclusions that improve task outcomes or efficiency in mostly familiar but sometimes complex work contexts.
Responsibility and Autonomy	Takes responsibility for initiating and completing water-industry asset tasks within set parameters and, where relevant, contributes to guiding or supporting others while working with a reasonable degree of autonomy.	Pre-empts the need for water-industry asset tasks to be initiated within set parameters, demonstrating accountability and responsiveness to emerging priorities or risks, and leading others to achieve team outcomes.

Professional recognition

This apprenticeship aligns with the requirements for professional body recognition as detailed in the occupational standard.

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