

Overview of the role

Building boats such as yachts, workboats and superyachts, and refitting and repairing existing boats.

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Standard in development L3: Boatbuilder

Title of occupation

Boatbuilder

UOS reference number

ST0059

Core and options

No

Level of occupation

Level 3

Occupational maps data

Route: Engineering and manufacturing

Pathway: Engineering, Manufacturing, Process and Control

Cluster: Manufacturing and process operative or technician

Typical duration of apprenticeship

42 months

Target date for approval

01/09/2024

Resubmission

No

Would your proposed apprenticeship standard replace an existing framework?

No

Does professional recognition exist for the occupation?

Yes

Occupation summary

This occupation is found in the marine sector.

The broad purpose of the occupation is to build boats such as yachts, workboats or superyachts or refit and repair existing boats. Boats may be made of composites, metals or wood so a boatbuilder works with and understands the capabilities of a variety of materials. They can read and interpret engineering and technical drawings to produce moulds, jigs, plugs and templates to create complex shapes using a variety of measuring equipment, machines and hand tools. They manufacture, assemble and repair components that form the structure of a boat as well as the interior and exterior fit out. Upon successful completion of their apprenticeship, the individual will be multi-skilled and thus capable of adapting to changing demands as boats become more complex, and new materials and methods are introduced.

In their daily work, an employee in this occupation interacts with associated trades such as marine engineers and marine electricians.

An employee in this occupation will be responsible for the quality and accuracy of their work. Boatbuilders work both individually and as part of a team. They understand and comply with organisational and statutory safety including sustainability requirements and can work with minimal supervision.

Typical job titles

Boatbuilder Shipwright

Are there any statutory/regulatory or other typical entry requirements?

No

Occupation duties

DUTY	KSBS
<p>Duty 1 Develop and maintain effective working relationships with colleagues, customers, suppliers, technical support staff, and other relevant personnel, to ensure that customer and business requirements are met.</p>	<p>K1 K2 K3 K4 K5 K7 K9 K16 K30 K32 S1 S2 S3 S5 S7 S8 S23 S25 B2 B3 B4 B5 B6</p>
<p>Duty 2 Maintain their own health and safety and that of others at work, ensuring a safe working environment including control of substances hazardous to health (COSHH), working at height, on the water and lifting operations, whilst preventing incidents, accidents and damage to assets.</p>	<p>K2 K3 K7 K8 K10 K12 K16 S3 S4 S5 S7 S8 S16 S20 B2 B4 B5</p>
<p>Duty 3 Plan for and set up tasks, following approved work methods. Interpret and use boatbuilding drawings, technical specifications, boatbuilding principles and organisational policies and procedures to assign materials and produce, manufacture, fit out or repair vessel hulls, structures, components or hardware.</p>	<p>K2 K3 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K20 K21 K22 K26 K27 K28 K29 K31 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S16 S21 B2 B4 B5</p>
<p>Duty 4 Select appropriate methods for positioning and holding materials and components in place during assembly, line-up, connecting or fixing.</p>	<p>K7 K8 K9 K10 K11 K12 K13 K14 K16 K23 K28 S3 S5 S6 S7 S8 S11 S12 S14 S16 B2 B4 B5</p>
<p>Duty 5 Select appropriate methods to produce, prepare, use, maintain and store plugs, moulds, jigs and templates.</p>	<p>K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K28 K31 S3 S5 S6 S7 S8 S9 S10 S11 S12 S14 S15 S16 B2 B4 B5</p>
<p>Duty 6 Prepare the work area, assemble or disassemble, move, shape and manipulate components or make repairs using suitable methods whilst safeguarding the integrity of components and the surrounding areas.</p>	<p>K7 K8 K9 K10 K11 K12 K13 K14 K16 K26 K28 K29 S3 S5 S6 S7 S8 S11 S12 S14 S16 S22 B2 B4 B5</p>
<p>Duty 7 Ensure the correct fixings, sealants and finishes are used (interior or exterior and above or below the waterline). Check that the quality of finish meets customer, operational and or regulatory requirements.</p>	<p>K7 K8 K9 K11 K12 K13 K14 K16 K24 K25 K27 K28 S3 S5 S6 S7 S8 S11 S12 S13 S14 S15 S16 B2 B4 B5</p>
<p>Duty 8 Make the most efficient and sustainable use of products, materials, tools and equipment to reduce waste and minimise adverse environmental impacts.</p>	<p>K7 K8 K9 K11 K12 K13 K14 K16 K28 K29 S5 S6 S7 S8 S11 S12 S14 S16 B2 B4 B5</p>

DUTY

KSBS

Duty 9 Restore the work area and dispose of waste (including hazardous waste) in a responsible manner, ensuring compliance with organisational procedures and relevant environmental regulations.

K7 K8 K9 K10 K11 K12 K16 K21
S3 S4 S5 S6 S7 S8 S14 S16 S19
B2 B4 B5

Duty 10 Conduct functional tests and visual and quality checks to the required standards.

K1 K2 K3 K7 K8 K9 K11 K16 K17 K18
K19 K23 K24 K25 K27 K28
S3 S5 S6 S7 S8 S11 S12 S16 S17 S18
S20
B2 B4 B5

Duty 11 Identify boatbuilding defects, provide correct solutions for rectification, and implement within own area of responsibility.

K2 K3 K7 K8 K9 K11 K12 K14 K16 K17
K18 K19 K27 K28
S3 S5 S6 S7 S8 S12 S17 S18
B2 B4 B5

Duty 12 Complete documentation at the relevant stages of the boatbuilding work operations in accordance with organisational policy, procedures and any other relevant information and guidance.

K3 K6 K7 K8 K9 K10 K11 K12 K16 K17
K18 K27 K29
S3 S4 S5 S6 S7 S8 S11 S16 S17 S18 S20
B2 B4 B5

Duty 13 Use continuous improvement principles to aid operational, professional, and personal performance and development.

K2 K3 K6 K7 K8 K9 K10 K11 K16 K17
K18 K19
S3 S4 S5 S6 S7 S8 S17 S18 S24
B1 B2 B4 B5

Duty 14 Select and use appropriate hand tool and machinery to complete boatbuilding tasks. Perform routine servicing and maintenance on equipment and tools.

K7 K8 K10 K11 K12 K13 K14 K16 K26
K28 K29
S3 S4 S5 S7 S8 S11 S12 S16 S21 S22
B2 B4 B5

Duty 15 Select, use and store materials and consumables that are used in boatbuilding activities.

K2 K3 K6 K7 K8 K9 K11 K12 K16
S3 S5 S6 S7 S8 S11 S12 S16 S20
B2 B4 B5

KSBS

Knowledge

K1: The national and international boatbuilding industry. Types of organisations and products. Supply chain. Customers. Customer requirements. Impacts on product demand.

K2: Verbal communication techniques. Giving and receiving information. Matching style to audience. Barriers in communication and how to overcome them.

K3: Written documentation: methods and requirements - electronic and paper.

K4: Non-verbal communication techniques.

K5: Customer service principles and techniques.

K6: Use of digital and information technology. How to access training. Virtual communication, access to files, and reporting.

K7: Boatbuilding terminology.

K8: Awareness of health and safety regulations, relevant to the occupation and a boatbuilder's responsibilities: Control of Substances Hazardous to Health (COSHH), electrical safety and compliance, emergency evacuation procedures, Health and Safety at Work Act, lifting operations, lone working, health surveillance, manual handling, near miss reporting, noise regulations, Provision and use of Work Equipment Regulations (PUWER), Personal Protective Equipment regulations (PPE), Respiratory Protective Equipment (RPE), confined spaces, work at height and work on or near the water.

K9: Boatbuilding materials, including composites, metal and wood, and components: sourcing, costing, pricing and budgeting principles. Reporting procedures.

K10: Risk assessment; different types of hazards, hazard awareness, hierarchy of controls and risk mitigation prior to and when undertaking boatbuilding operations. Safety equipment: personal protective equipment (PPE), guards, exclusion zones, signage, fire extinguishers, situational awareness, slips, trips and falls.

K11: Sustainable use of products. Efficient use of resources, materials, tools, equipment and energy. Reducing material waste and environmental impact by applying recycling and disposal procedures.

K12: Principles of selecting and allocating tools, materials, equipment and components. Their maintenance, storage, and expiration date. Manufacturers' instructions, what they are and how to use them.

K13: Principles and techniques used in manufacturing boats from composite, wood and metal materials.

K14: Principles and techniques used to repair existing boats with composite, wood and metal materials.

K15: Principles, techniques and materials to produce, prepare, use, maintain and store plugs and moulds.

K16: Standard operating procedures (SOP). What they are and why they are important. What they need to cover and why and where they are located.

K17: Quality management standards. Quality assurance principles and practice. Record keeping.

K18: Principles of ensuring boatbuilding processes and work products include continuous improvement techniques and how they are integrated into work processes and procedures.

K19: Problem solving techniques: diagnostics, root cause analysis, 5 Why's, PDCA (Plan Do Check Act).

K20: Human and commercial factors that affect productivity in the workplace and how to identify potential issues and actions to mitigate them; prioritising, work scheduling, workflow and time management techniques.

K21: Principles of maintaining the workplace environment.

K22: Principles of interpreting boatbuilding information.

K23: Principles of positioning, holding and securing of materials when undertaking boatbuilding operations.

K24: The different fastenings, sealants and adhesives, both internally and externally, above and below the waterline and how to use them. How to ensure the quality of finish meets requirements.

K25: The different surface finishes used while undertaking boatbuilding operations and how to apply them.

K26: Principles of protecting surfaces, components and structures at all stages.

K27: Principles and methods of checks and tests.

K28: Manufacturer warranties: what they are and impact on boatbuilding work.

K29: Maintenance practices and techniques for equipment and tools: planned, preventative, predictive and reactive methods and their frequency.

K30: Equity, diversity, and inclusion in the workplace.

K31: Principles, techniques and materials to produce, prepare, use, maintain and store jigs and templates.

K32: Team working principles.

Skills

S1: Communicate with others verbally for example, colleagues and stakeholders.

S2: Respond to customer requirements.

S3: Apply health and safety procedures and safe systems of work.

S4: Identify and document hazards and risks in the workplace. Apply control measures.

S5: Identify, organise and use resources to complete tasks, with consideration for cost, quality, safety, security and environmental impact.

S6: Apply environmental and sustainability procedures for example, segregate resources for reuse, recycling and disposal.

S7: Follow standard operational procedures when carrying out work processes.

S8: Interpret information - paper based or electronic. For example, drawings and designs, formulae, risk assessments, manufacturers' documentation, and repair specifications.

S9: Produce, prepare, label, use, maintain and store plugs and moulds.

S10: Produce, prepare, label, use, maintain and store jigs and templates.

S11: Apply manufacturing techniques to boats such as yachts, workboats or superyachts.

S12: Apply repair techniques to existing boats such as yachts, workboats or superyachts.

S13: Apply surface finishes such as varnishes, paints, and gel coats.

S14: Select, use, and store materials and consumables.

S15: Use products, techniques, and methods of finishing, such as polishing.

S16: Select, use, and store equipment, hand tools and machinery.

S17: Apply continuous improvement techniques. Provide suggestions for improvement.

S18: Conduct tests and checks when performing boatbuilding work operations.

S19: Restore the work area on completion of the task.

S20: Record and enter information - paper based or electronic. For example, job sheets, risk assessments, process records, test results, handover documents and original equipment manufacturers' (OEM) documentation.

S21: Perform routine maintenance and servicing on equipment and tools.

S22: Protect surfaces, components and structures at all stages of work operations.

S23: Follow equity, diversity and inclusion procedures.

S24: Carry out and record planned and unplanned learning and development activities.

S25: Apply team working principles.

Behaviours

B1: Committed to continued professional development (CPD) to maintain and enhance competence in their own area of practice.

B2: Consider the environment and sustainability.

B3: Supportive of the needs and concerns of others, for example relating to diversity and inclusion.

B4: Take personal responsibility for and promote health and safety.

B5: Act in a professional manner.

B6: Collaborate and promote teamwork across disciplines.

Qualifications

English and Maths

Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Does the apprenticeship need to include any mandated qualifications in addition to the above-mentioned English and maths qualifications?

No

Professional recognition

This standard aligns with the following professional recognition:

- Institute of Marine Engineering, Science and Technology (IMarEST) for Engineering Technician

Subject sector area

4.2 Manufacturing technologies