

Introduction and Overview

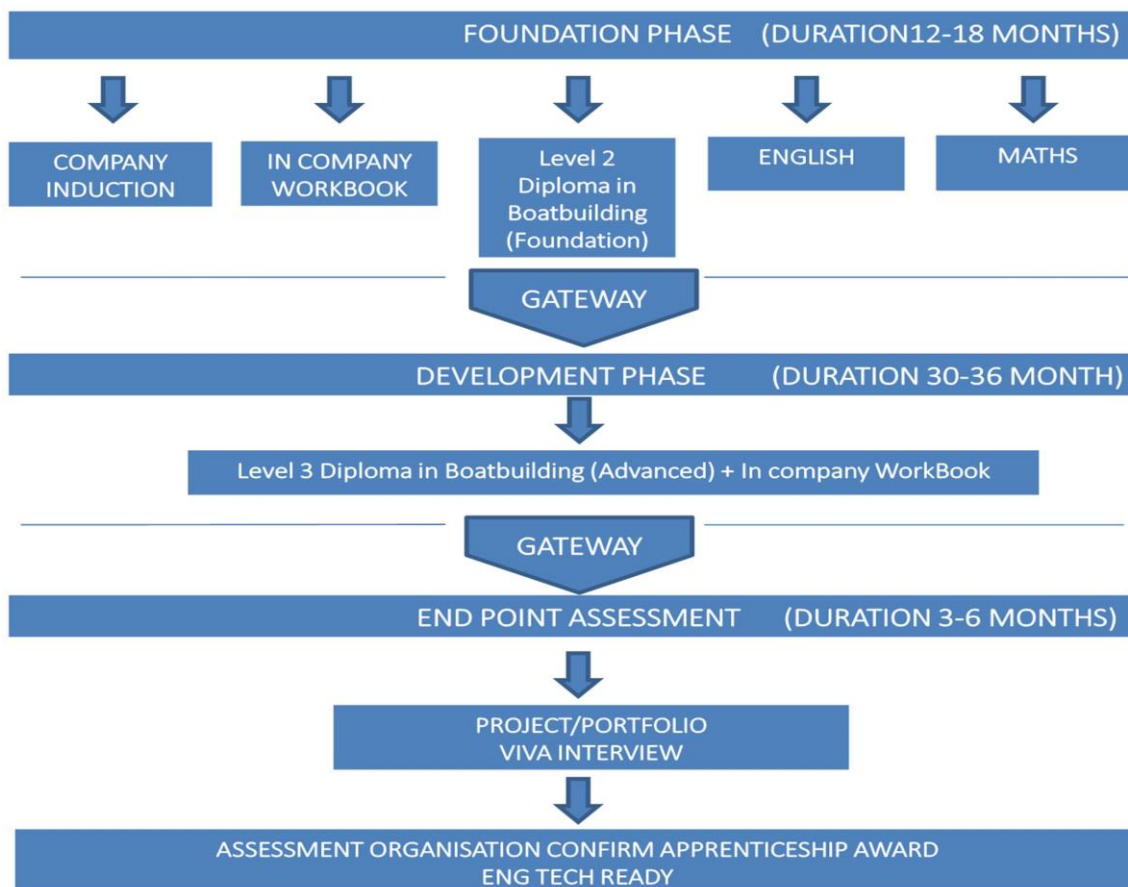
The Boatbuilder apprenticeship is designed to develop the professional standard required of people working as Boatbuilders. The model has been determined by a boatbuilding employer group consisting of small, medium and large sized employers incorporating British Marine who represent the industry. The concept of ‘competence’ is considered to be very important to employers within the sector. This is due to the technical precision associated with the production and installation of marine components and assemblies.

This plan outlines suggested on-programme training/assessment and details the requirements for the end point assessment. It will be of interest to boatbuilder apprentices, employers, training organisations and assessment organisations.

The apprenticeship will typically take 48 months, with the end point assessment taken during the final three to six months. Apprentices will be awarded a ‘pass’ or ‘fail’ based on their performance in the end point assessment. The end-point assessment involves a viva interview, consisting of a presentation, questions and discussion; based around a work based project, evidenced by a portfolio. Apprentices will be required to complete a work based project(s) requiring them to evaluate the need, design a solution and manufacture/repair components/items to meet a particular boatbuilding related and work based problem. Project design briefs will be set by the assessment organisation to ensure that tasks are set which are realistic, achievable and which are suitable for the context and content of the apprenticeship standard requirements. Successful apprentices will meet Eng Tech status with IMarEST and will have free access to student membership during the apprenticeship. After the apprenticeship, students have the opportunity to be associate members of IMarEST to qualify for the Eng Tech certification.

Illustrated Journey

The following diagram provides a summary of the suggested on-programme training/assessment and end point assessment process for the Boatbuilder apprenticeship.



Section A – Suggested On-programme Training and Assessment

Apprenticeships require 20% off-the-job training, which for the Boatbuilding apprenticeship should be complemented by substantial learning activity on the job, working in workshop areas constructing, and/or maintaining/repairing boats. In the workplace, apprentices should undergo regular performance reviews to check their progression.

It is recommended that apprentices undertake two qualifications that have been designed to meet the requirements of the standard and contain a robust competency assessment together with an in-depth assessment of knowledge: Level 2 Diploma in Boatbuilding (foundation) (available Spring 2016) and Level 3 Diploma in Boatbuilding (Advanced) (available early 2017). The qualifications comprise core and optional units to enable the qualification content to be selected to best reflect the specific nature of the place of work. The qualifications will follow published boatbuilding occupational standards and will include business improvement techniques. It is recommended that the Level 2 Diploma in Boatbuilding (Foundation) qualification is taken during a 'Foundation Phase' and the Level 3 Diploma in Boatbuilding (Advanced) qualification is taken during a 'Development Phase', as outlined below.

The suggested two phases of the apprenticeship are structured as follows:

Foundation Phase (12-18 months):

During the Foundation Phase, apprentices should:

- complete a formal work based induction and industry induction which helps to introduce them to the wider scope and opportunities offered within the wider boatbuilding and marine sector
- demonstrate that they have developed skills that ensure they are of long term value to the employer
- demonstrate that they have developed transferable skills that are of value to a cross section of production, manufacturing, service and construction sectors
- demonstrate that they have developed competency in working with at least two different types of material, including wood, composites, and metals.

The above should be evidenced in the apprentice's 'in company work book.'

- complete a foundation skills qualification, Level 2 Diploma in Boatbuilding (Foundation) being the recommended route. (To be mandated in Spring 2016.)

In addition, apprentices without level 2 English and mathematics will need to achieve this level during this phase. Apprentices should successfully complete the Foundation phase prior to progressing onto the Development phase of the apprenticeship. Achievement of this phase is referred to as the first 'Gateway'. The employer should decide with the training provider when the apprentice can pass through the 'Gateway'.

Development Phase (30-36 months):

The Development Phase of the Boatbuilder apprenticeship should take the main body of time. Apprentices should be required to complete work at a higher level of competence.

Core to the Development Phase should be a learning activity which will prepare students to achieve full competency, with the Level 3 Diploma in Boatbuilding (Advanced) qualification, being the recommended route. (To be mandated early 2017.)

Apprentices should successfully complete the Development Phase prior to progressing onto the end point assessment of the apprenticeship. Achievement of this phase is referred to as the second 'Gateway'. The employer should decide with the training provider when the apprentice can pass through the 'Gateway' into the end point assessment.

Section B - End Point Assessment

What will be assessed during the end point assessment:

The end point assessment activities will assess skills, knowledge and behaviours detailed within the apprenticeship standard. The work based project and viva panel interview process will seek to assess across higher order skills. This will be assisted through the careful design of the work based projects. The content of the apprenticeship standard is presented at Annex B.

The end point assessment enables successful apprentices to comply with the required standards and qualify them to achieve Eng Tech status; applying proven techniques and procedures to the solution of practical boatbuilding problems whilst applying safe systems of work and demonstrating:

- evidence of their contribution to either the design, development, manufacture, commissioning, decommissioning, operation or maintenance of products, equipment, processes or services
- supervisory or technical responsibility
- effective interpersonal skills in communicating technical matters
- commitment to professional engineering values in boatbuilding.

End Point Assessment Activities:

Formal end point assessment will be spread across two activities:

Activity 1 – Work based project(s): The apprentice will be required to complete a work based project(s) during the last 3-6 months of their apprenticeship.

Project tasks will be defined by the assessment organisation. Employers working with their apprentice will be required to select a single or selection of work based projects which reflect the operational activities of the business and allow competence to be demonstrated across the boatbuilder standard. In some instances, single large projects may have a sufficient breadth. In other instances, the employer may wish to select two or three smaller project activities.

This flexible approach ensures that the end point assessment activity directly reflects that actual type of work that the apprentice does in the workplace and enables the work to fit in with daily work requirements and available resources. This helps to ensure the sustainability and affordability of the end point assessment process.

Apprentices will be required to use research, investigation and problem solving skills as well as practical skills to achieve a specific project goal. A sample project brief is presented at Annex A. The project brief is linked to the attainment and standards of Eng Tech.

The apprentice will be required to compile details of the project(s) in the form of a simple portfolio containing images and documentation which demonstrate what the apprentice has implemented/built and completed during the project(s). This may also include statements from experienced staff and the apprentice's employer who can comment as to how the work implemented has met organisational quality and the stated operational standards.

The apprentice will complete a matrix to indicate how the project(s) demonstrates competence against the boatbuilder standard and Eng Tech parameters.

On completion, the finished portfolio will be sent by the employer/apprentice to the assessment organisation. The portfolio will be reviewed by an independent assessor appointed by the assessment organisation (see requirements for independent assessors below). The review will involve checking the portfolio which provides evidence of competency across the standard and is ready to go onto the viva panel.

If the project does not contain evidence of competency across the standard, it will be returned to the apprentice together with feedback on additional evidence required. The apprentice will then be required to submit additional evidence of activity to rectify the areas of performance that do not meet the required standard. The apprentice will have one month to make amendments before resubmission.

If the portfolio has sufficient evidence of competency across the standard it will be forwarded to the panel members who sit on the viva interview panel.

Activity 2 – Viva interview: A Viva interview will be held where the apprentice will be required to demonstrate their understanding and provide evidence of their practical capability to a panel made up of two assessors as detailed below. The Viva Interview will be a maximum of 60 minutes duration.

The apprentice will be required to take part in two assessment processes:

- Provide a verbal presentation of 20-25 minutes duration, on the work that they have produced in the work based project(s). The apprentice should use the content of their portfolio to illustrate this and may wish to use PowerPoint or other software. This will lead to a professional discussion with the panel members. Discussion points may include:
 - How the apprentice selected the methods for repair/construction
 - How they scheduled and planned the activities
 - What problems they encountered
 - How they overcame problems
 - What problem solving techniques they used.
- Provide responses to a series of competency based questions put to them by the panel members. These will be designed to evaluate how the apprentice applies knowledge based concepts to practical situations. Typical questions may include:
 - Provide an example of how you have worked with colleagues to solve a work based problem
 - Describe how you have evaluated your own performance and what you have done to improve your own skills and knowledge
 - Describe a situation when you communicated directly with a customer
 - What was the nature of their enquiry and how did you ensure that the organisation was suitably represented.

The viva panel will be issued with a series of standardised, competency based questions and discussion points developed by the assessment organisation which will encourage the apprentice to illustrate answers to questions with examples of practical application. The use of standardised questions and training on how to use them will ensure consistency across the implementation of the independent assessment.

The competency questions during the viva will assess and check understanding across the breadth of the apprenticeship standard.

The viva interview will be designed to ensure that the apprentice is put at ease and is comfortable. The viva should be an opportunity for the apprentice to demonstrate their understanding of the subject matter and its application.

Grading:

Apprentices will be awarded a 'pass' or 'fail' for the apprenticeship based on their performance in the end point assessment activities.

The panel assessors will assess the evidence from the portfolio and viva interview against the requirements of the boatbuilder standard. The independent assessor will chair the assessment panel and have the casting vote if there is a disagreement with the outcome. Panel decisions will be subject to moderation by the assessment organisation.

The decision will be given to the apprentice within four weeks of the viva.

Appeals:

Any appeals of awards would be dealt with by the assessment organisation's policy.

Panel Members:

Assessment panels will be made up of two assessors appointed by the assessment organisation, a technical expert from within an apprentice's place of employment and an independent assessor.

The technical expert could be a mentor, line manager, senior manager, supervisor who is familiar with the working practices and quality standards the apprentice is required to work to. They will also need to demonstrate to the assessment organisation that they have appropriate boatbuilding qualifications or experience demonstrating competence equivalent to or above that of the boatbuilder standard.

The independent assessor appointed by the assessment organisation, must be independent of the apprentice and their employer. In addition they must be Level 3 qualified boat builders and experienced and qualified in the assessment profession.

Independent assessors from assessment organisations implementing end point assessments will be required to attend training and standardisation meetings. These meetings, held at least twice per year, will seek to ensure that all components of the end assessment are implemented consistently and, where needed, clarification provided. The meetings will be convened and hosted by the assessment organisation.

Assessment Organisations:

Assessment organisations will:

- Develop and offer a range of work based project briefs and competency based question briefs that cater for the wide range of boatbuilding techniques and materials used. This includes taking account of the size of the businesses
- Produce documentation and guidance in relation to all end-point assessment activities/tools and offer a range of supporting materials, such as sample and recommended portfolio templates to apprentices and their employers to help with assessment preparations
- Appoint independent assessors to review portfolios ahead of the Viva interview
- Appoint and approve panel members, on the basis of the criteria above
- Organise and run panels, ensuring sufficient geographical coverage across England and regularity
- Plan and arrange the scheduling of Panel Interview days by creating appointment slots that are allocated to apprentices on demand and usually 6 weeks in advance. Employers or delegated providers will book Panel Interview appointments via phone or online. It is anticipated that for large organisations where multiple apprentices may be assessed, the assessor will host the Panel Interview at the employer's location. For smaller employers, Panel Interviews will be hosted at a location convenient to the organisations seeking to purchase assessment services
- Undertake moderation and quality assurance activity to ensure consistency in results
- Provide training for assessors, including standardisation meetings as outlined above
- Work collaboratively to ensure consistency using cross standardisation and bench marking.

It is expected that apprentices will be assessed in a fair and consistent way without any doubt as to credibility of achievement that must be recognisable across UK and indeed the world. Assessment Organisations wishing to support the implementation of the boatbuilder apprenticeship must apply to and be approved under the Skills Funding Agency (SFA) administered 'Register of Apprentice Assessment Organisations.'

Assessment Organisations wishing to be approved to operate boatbuilder end point assessments must as a minimum be able to;

- Be willing to work collaboratively
- Show experience of development and design assessment including standardisation approaches
- Show experience of the marine engineering sector (particularly boatbuilding)
- Show experience of developing end assessment support materials for marine industry stakeholders
- Provide evidence of independent assessor background experience in the boatbuilding sector
- Provide evidence of IT infrastructure for the collection of data from prospective learners
- Show experience of working with specialist employers and providers of marine engineering and boatbuilding industry training, especially those with modern facilities where learning and skills can be assessed
- Provide evidence of working with or have the potential to train and develop a field force of independent assessors that are Level 3 qualified boat builders and experienced and qualified in the assessment profession.

Implementation

Affordability & Flexibility

In developing this assessment approach with employers, the boatbuilder employer group has prescribed assessment methods that enable apprentices to demonstrate their competence whilst ensuring that boatbuilding businesses are comfortable with the administrative and time requirements required by the end point assessment processes.

This has led to a well-defined, cost-effective and deliverable process that employers will find easy to understand and apply to their own environment. Where additional support is required, the training provider can step in to offer their expertise.

The **flexibility and affordability** built into this assessment model is critical to its ability to cater for all types and sizes of boatbuilding businesses. The following key points deliver this:

- The end point assessment project should be an actual work project in the work place where time and materials will not cost the business additional expenditure.
- Use of panel interviews enables assessment to be closely tied and referenced to real work activity and thus ensuring that assessment decisions are based on genuine work performance.
- **The cost of the end point assessment will be approximately 4% of the total cost of delivery.**

Implementation Plan

The approach to development and implementation will continue to be informed by close consultation with assessment organisations, training providers, awarding organisations and professional bodies, as well as assessment specialists.

The group of employers will work closely with all those involved in the development and delivery of the training and assessment to learn any early lessons, to identify any required remedial actions and to share best practice.

The recommended qualifications are under development; 'Foundation Skills – Boatbuilder' will be available Spring 2016 and 'Advanced Skills – Boatbuilder' will be available early 2017.

It is anticipated that there will be 50 learners enrolled on this apprenticeship in 2016/17 and 100 annually thereafter.

Annex A –

Sample Work Based Project for End Point Assessment

Project brief- Wood based production

Assessment Task - Repair to wood based craft

Assessment Title:

End point assessment project 1: Wooden boat repair.

Deadline date:

The project activity and relevant evidence should be completed by:

Start date:

Assessment conditions

Location:

The assignment should take place in the workshops or other locations where the apprentice typically works, with access to all the appropriate equipment, machinery, relevant tools and consumables for working safely with boat building equipment and marine engineering materials.

Time:

The project activity should take no longer than 5 days (40hrs) to complete. This can be either in one block of time or spread over a longer period depending on the nature of the activity.

Security of work:

During the assignment any unfinished task/work in progress must be kept in a secure environment to avoid damage, theft or possible plagiarism.

Supervision:

Apprentices must be able to work autonomously to complete the task, reflecting usual working practices.

Assessment Composition

Task	Evidence	Standard Coverage
Task 1 Planning for a repair	<ul style="list-style-type: none"> ▪ Written plan for implementing work 	Identify and respond to customer needs
		Write simple documents
		Calculate costs of materials and labour
Task 2 Implementation of a repair to structural components of a boat	<ul style="list-style-type: none"> ▪ Photo graphs of key stages and finished work ▪ Confirmation by qualified supervisor that work meets organisational standards 	Work methods (health and safety)
		Planning and set up
		Manufacture and assemble components
		Disassemble, repair and re-assemble components
		Fit out
		Finish
Support commissioning and sea trials		

Scenario/context

You are being asked to demonstrate your skills and understanding as to how to plan and implement a repair to a wooden boat. This may be a hull repair, the replacement of a deck beam, repair to a deckhouse, etc.

You will be required to develop a plan which sets out what you plan to do and how you will approach the completion of the repair. You will then be required to implement the practical work to complete the repair to a standard that reflects the organisational standards.

The assignment has been divided into 2 different tasks. Task 1 requires you to develop a plan for the implementation of the repair. Task 2 focuses specifically on the practical implementation and completion of the repair.

Task 1:

Planning for a repair

Your portfolio will need to:

- Identify the sources of information that may be used to inform the planning of a repair
- Assess how the repair should be implemented, considering factors including:
 - Construction methods
 - Materials available
 - Power and machinery
 - Safety
 - Levels of available information related to the design/construction
 - Budget
 - Proposed time constraints
 - Legal constraints

Evidence to be submitted in a portfolio:

You will be required to hand in a succinct report which covers the areas listed above.

Task 2:

Implementation of a repair to structural components of a boat

Implement the repair for which the plan has been completed. The repair to be wholly implemented and completed by the apprentice.

Photographs should be taken of key stages of the repair.

The repair will need to:

- Demonstrate the removal of damaged material and/or components that need to be removed to access the repair
- Stabilisation of material to remain
- Measurement of materials needed
- Selection of suitable repair materials
- Efficient use of cutting/processing of the material to be used to effect the repair
- Test fitting and final fitting of repair material
- Application of glues, fixings
- Checking that repair retains the integrity and strength of the vessel
- Finish and application of surface finishes
- Re-assembly of components

Evidence to be submitted in a portfolio:

Your assessor/qualified supervisor will sign off a record of the repair that has been applied

A series of photographs which show the key stages of the repair being implemented

Sample Work Based Project for End Point Assessment**Project brief- Composite based production****Assessment Task: Forming composite sections****Assessment Title:**

End point assessment project 2: Forming composite sections.

Deadline date:

The project activity and relevant evidence should be completed by:

Start date:**Assessment conditions****Location:**

The assignment should take place in the workshops or other locations where the apprentice typically works, with access to all the appropriate equipment, machinery, relevant tools and consumables for working safely with boat building equipment and marine engineering materials.

Time:

The project activity should take no longer than 5 days (40hrs) to complete. This can be either in one block of time or spread over a longer period depending on the nature of the activity.

Security of work:

During the assignment any unfinished task/work in progress must be kept in a secure environment to avoid damage, theft or possible plagiarism.

Supervision:

Apprentices should be able to work autonomously to complete the task, reflecting usual working practices.

Assessment Composition

Task	Evidence	Standard Coverage
Task 1 Planning for manufacture	<ul style="list-style-type: none"> ▪ Written plan for implementing work 	Complying with statutory regulations and organisational safety requirements
		Using and interpreting engineering data and documentation
Task 2 Assembling and preparing a mould	<ul style="list-style-type: none"> ▪ Photo graphs of key stages and finished work ▪ Confirmation by qualified supervisor that work meets organisational standards 	Work methods (health and safety)
		Planning and set up
		Preparing moulds for wet lay up
Task 3 Implement lay up	<ul style="list-style-type: none"> ▪ Photo graphs of key stages and finished work ▪ Confirmation by qualified supervisor that work meets organisational standards 	Producing marine composite components using wet lay-up techniques
		Producing marine composite assemblies

Scenario/context

You are being asked to demonstrate your skills and understanding as to how to plan and implement the production of a composite component for a boat. This may be a hull form or section that contributes to the deck or interior structure.

You will be required to develop a plan which sets out what you plan to do and how you will approach the completion of the process. You will then be required to implement the practical work to complete the production of the item to a standard that reflects the organisational standards.

The assignment has been divided into 3 different tasks. Task 1 requires you to develop a plan for the implementation of the work. Task 2 focuses on the preparation of the mould. Task 3 focuses on the wet lay-up process.

Task 1:

Planning for manufacture

Your report will need to:

- Identify the sources of information that may be used to inform the planning of the manufacture
- Assess the volume of materials needed to complete the task and the time required
- The report should also identify how health and safety measures will be implemented during the manufacturing process
- The report should detail:
 - Construction methods
 - Materials available
 - Power and machinery
 - Safety
 - Levels of available information related to the design/construction
 - Budget
 - Proposed time constraints

- Legal constraints.

Evidence to be handed in:

- A succinct report which covers the areas listed above, which sets out how the moulding process should be implemented.

Task 2:

Assembling and preparing a mould

You should assemble and prepare a mould to a state where it is ready for use. The preparation to be wholly implemented and completed by the apprentice

Photographs should be taken of key stages of the mould preparation/assembly.

The mould assembly and preparation will need to:

- Demonstrate how the mould should be manufactured
- How / why the mould should be structured to ensure that it does not flex
- How / why the mould is checked to ensure the formed shape complies with the component drawings
- How / why the mould should be cleaned and release agents applied.

Evidence to be handed in:

- A record, signed by an appropriately qualified supervisor which describes how the mould has been manufactured and prepared for use
- A series of photographs which show the key stages of the mould preparation process.

Task 3:

Implement lay-up

Implement the lay-up process to complete the manufacture/repair of a component. The manufacture/repair to be wholly implemented and completed by the apprentice.

Photographs should be taken of key stages of the repair.

The lay-up process will need to:

- Demonstrate that all relevant health and safety procedures have been followed
- Demonstrate that the work area is safe
- Show that materials are checked for their suitability
- Show that temperature of the work area is controlled and monitored
- Demonstrate that matting is cut and laid correctly
- Demonstrate that resin is mixed and applied correctly.

Evidence to be handed in:

- A record, signed by an appropriately qualified supervisor which describes how the manufacture/repair of the item has been implemented by the apprentice
- A series of photographs which show the key stages of the lay-up process.

Annex B

Boat builder Apprenticeship Standard

Occupation : Boatbuilder Level: 3 Profile

Boatbuilders build boats such as yachts, workboats and superyachts and/or refit and repair existing boats. Boats may be made of composites, metals or wood so a boatbuilder can work with and understand 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 and assemble components that form the structure of a boat as well as the interior and exterior fit out. They will be expected to 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 minimum supervision. They are responsible for the quality and accuracy of their work and are good communicators and problem solvers. Boatbuilders typically work with associated trades such as Marine Engineers and have a strong understanding of the marine industry. 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.

Requirements: Skills & Knowledge WORK ASPECTS	SKILL The boatbuilder will:	KNOWLEDGE AND UNDERSTANDING The boatbuilder will know and understand:
Work methods	<ul style="list-style-type: none"> • Prepare the work area • Maintain safe, clean and efficient work methods and environments • Identify and minimise hazards and risks in the workplace • Select, use, maintain and store equipment, tools and materials • Follow and maintain work procedures, method statements and production records • Make the most efficient and effective use of resources, time and materials 	<ul style="list-style-type: none"> • The purpose of a range of equipment, tools and materials • The characteristics and reaction of materials to their environment e.g. temperature, humidity, pressure • Safe and efficient methods of use, maintenance, movement, protection and storage of materials • Work hazards and safe working methods • Broad knowledge of other marine trades to understand their needs • How to produce and interpret engineering drawings and understand boatbuilding terminology
Identify and respond to customer needs	<ul style="list-style-type: none"> • Prepare for meetings and discussions • Use appropriate listening, questioning, recording and presentation techniques • Use appropriate marine terminology • Use estimating techniques to support discussions 	<ul style="list-style-type: none"> • The international marine industry and the company's place within it • The company's products and services • The role of formal and informal communication • The uses of information technology in the workplace • Principles of costing, pricing and budgeting
Planning and set up	<ul style="list-style-type: none"> • Review and verify designs and plans • Finalise time and cost of the work to be done • Identify and source equipment, machinery, tools and materials • Make, produce and use jigs and templates as required • Set up tools and machinery 	<ul style="list-style-type: none"> • The company's process for design, planning and set up • How to obtain the required specifications using selected procedures • The conventions underpinning technical documentation • the roles and safe and efficient uses of machinery • The uses of templates • Vessel design and construction, complex shapes and the applications of geometry • The bill of materials methodology and reporting of discrepancies • Feedback on drawing and specification errors of modifications required

<p>Manufacture and assemble/ disassemble and repair components</p>	<ul style="list-style-type: none"> • Manufacture or repair components to the required specification • Move components using the appropriate safe methods • Check components for robustness, fit and tolerances • Analyse problems with machinery, equipment, tools and material, proposing/implementing solutions where appropriate • Move, shape and manipulate components to achieve best fit • Select and use appropriate methods for holding materials, and components in place during assembly, and for the connecting, fixing and assembly of materials and components • Safeguard materials and components during assembly • Select suitable methods of repair that are effective and maintain original construction • Select suitable methods for fault finding and analysis • Make repairs whilst safeguarding the integrity of components and the surrounding area • Identify, mark, store and organise dismantled parts for reassembly 	<ul style="list-style-type: none"> • The appropriate uses of measuring aids and equipment • The basic principles of contingency planning and of problem solving • The options and constraints during assembly • Working with complex shapes and curves • The scope of materials for shaping and manipulation • The options for holding and clamping components prior to assembly • The properties, uses and limitations of materials for connecting, fixing and assembling components • De-storing a vessel for repair, safeguarding and protecting all removed items. • Methods of disassembling boats for repair • Fault finding techniques • A range of new and traditional techniques for boatbuilding
<p>Fit out</p>	<ul style="list-style-type: none"> • Determine the order and work methods • Install and fix components using the most appropriate method and material • Ensure that joins are suitably made and treated • Position and fit items • Finalise fit out for deck hardware 	<ul style="list-style-type: none"> • The options for connecting similar and dissimilar materials • Types and uses of deck hardware and the forces applied • The options for fixing components in place • Understanding service and maintenance requirements
<p>Finish</p>	<ul style="list-style-type: none"> • Check joins are sealed and fit for purpose • Prepare surfaces, treat suitably and ensure are free from defects and protected • Soften or suitably finish edges • Assess quality of work 	<ul style="list-style-type: none"> • The correct materials and sealants are used below the waterline. • The balance between the quality of finish, time and cost • The properties and applications of varnishes, paints and sealants
<p>Support commissioning and sea trials</p>	<ul style="list-style-type: none"> • Assess fixtures and fittings for quality and stability • Contribute to the commissioning of the boat as required • Assemble required documentation • Brief recipients verbally with necessary documentation 	<ul style="list-style-type: none"> • Manufacturers’ specifications and requirements • Guidance for the care and maintenance of materials • The relevant documentation • Boat handling skills • Understand the requirements for basin and sea trials • Principles of practice for working on or near water

Behaviours

Boatbuilders will be expected to demonstrate:

- Appropriate safety behaviours individually and towards others
- A commitment to quality and continuous improvement
- Commercial awareness and business acumen
- A focus on the requirements of the customer
- An ability to work effectively individually and as part of a team
- An ability to communicate with all levels of the organisation
- A strong work ethic including motivated, committed, meticulous, reliable, proactive and adaptable behaviours
- A recognition and appreciation of equality and diversity in the workplace

Entry requirements

Individual employers will identify any relevant entry requirements. Most candidates will typically have GCSEs (or equivalent) at A*-C including maths, English and possibly a relevant science.

Duration

Boatbuilders require a significant amount of training and experience to undertake their role and an apprenticeship will typically last 48 months to build competence in the skills, knowledge and behaviours to become a Boatbuilder. This timescale may reduce if an apprentice is part-qualified on entry.

Link to professional registration and progression

This will be recognised by Institute of Marine Engineering, Science and Technology (IMarEST) at 'Engineering Technician' level on successful completion of the apprenticeship.

Review date - The standard will be reviewed after 3 years.

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