

# NATIONAL CERTIFICATE IN BOATBUILDING WOODEN (Level 4)

358 CREDITS Version 5

An apprentice completing this NZQA registered qualification will gain the knowledge and skills required to be Marine Industry recognized and qualified as a competent **Wooden Boatbuilder**.

In this qualification, apprentices gain a comprehensive and detailed understanding of all aspects of wooden boat construction.

In this qualification, apprentices gain a general knowledge of the boatbuilding sector of the Marine Industry, health and safety, boat drawing, lofting techniques, pattern making, calculations, the safe and correct use of all boatbuilding tools, the framing and sheathing of hulls and the construction in wood, of internal and external components including decks and superstructures.

This is a specialist area in boatbuilding where traditional skills and knowledge are kept alive and relevant to the niche market of wooden boatbuilding. There has been a resurgence of interest of these skills in recent times, accompanied by an increase in refurbishment and renovation projects on older and even historic boats. Working in this part of the industry can be very satisfying.

This qualification takes on average 3 to 5 years to complete.

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Henry Bastion

Henry Bastion completed his National Certificate in Boatbuilding (Wooden) Level 4 in 2007. He has great memories of the two boats he worked on during that time, being involved in the build, the fit out and the sea trials.

He is now an apprentice trainer and assessor at Stark Brothers Boat Builders in Lyttleton and a team leader, second in charge of steel boatbuilding.

In future, he would like to be in overall charge of a build, take part in superyacht deliveries and learn more about the whole Marine Industry.

*“My Apprenticeship was definitely worthwhile. It’s had the biggest impact on my life, so far – making me who I am. Still lots to learn though” – Henry Bastion.*

**Unit Standard Content**

Unit Number	Unit Title	Level	Credit Value
414	Demonstrate knowledge of the distribution environment	2	4
5433	Demonstrate knowledge of electrical and electronic applications for marine use	4	8
9913	Demonstrate a knowledge of the New Zealand marine industry	2	3
9917	Demonstrate knowledge of boatbuilding methods	2	4
9922	Produce templates and patterns used in boatbuilding	3	4
9923	Install internal and external boat hardware fittings	4	4
9930	Plank a boat framework	4	20
9932	Install interior boat cabinetry	4	10
9933	Install exterior boat joinery, modules and components	4	10
9934	Construct interior wooden support structures for boats	4	15
9935	Construct interior boat cabinetry in timber	4	20
9936	Construct exterior boat joinery in timber	4	20
9939	Build boat frameworks in timber	4	20
9940	Plank and glass sheathe a mould or boat	4	15
10836	Produce scale drawings of boat surfaces from corrected offsets	2	6
10841	Produce a half model of a small craft to scale	4	10
11787	Prepare wooden substrates for marine surface coatings	4	5
12942	Build boat framework under supervision	3	15
18158	Select, use and care for hand tools used in boat building	2	5
18159	Select, use and care for portable power tools used in boat building	2	5
18160	Operate mechanical plant used in boatbuilding	2	12
18161	Perform measurements and calculations used in boatbuilding	2	5
18162	Calculate quantities and costs for boatbuilding projects	3	4
18163	Demonstrate a knowledge of boatbuilding construction drawings and produce related freehand sketches	3	2
18164	Demonstrate knowledge of insulation and install insulation in boats	3	2
18165	Demonstrate knowledge of computer technology used in the boating industry	3	6
18166	Participate in a project team in the boating industry	2	4
18169	Laminate and join timber materials used in boatbuilding	3	4
18170	Contribute to a project team in the boating industry	3	3
23035	Describe and install boat tankage systems	3	6
23037	Demonstrate knowledge of traditional wooden boatbuilding	3	10
23241	Loft a boat hull	4	10
23242	Loft full sized decks and superstructures	4	6
23243	Identify and explain the causes and prevention of material deterioration in the marine environment	4	8
23244	Identify and apply health and safety procedures for the boatbuilding industry	3	4
25113	Describe filling and fairing technology used in boatbuilding	3	4
25115	Describe, install and test plumbing systems in boats	3	6
25116	Lift, support and move boats and components	3	8
25117	Demonstrate knowledge of timber used in boatbuilding	3	4
25118	Demonstrate knowledge of adhesives used in boatbuilding	3	3
25343	Identify boat fittings and fastenings	2	4
25344	Demonstrate knowledge of marine trades and expectations of employees	2	3
25345	Demonstrate knowledge of terminology used in the marine industry	2	6
26542	Demonstrate basic knowledge of the operation of recreational craft by day	2	6

**Elective Unit Standard Content** Plus at least **25** credits from the following list:

Unit Number	Unit title	Level	Credit Value
3160	Produce a laminated polyester resin item to a product specification for composites	3	5
3161	Produce an epoxy resin item to a product specification for composites	3	5
3162	Produce a vinyl ester resin item to a product specification for composites	3	5
3170	Produce a laminate by vacuum bagging for composites	4	2
3181	Produce a plug or pattern for composites	4	12
3198	Alter resin rheology with fillers, extenders and additives for composites	5	3
9931	Overlay boat decks with teak	4	15
9937	Install interior and exterior boat systems	4	10
10843	Mark out full sized boat components from loftings and computer generated mylars	3	2
11777	Install production inboard engine packages in boats	3	6
11778	Install and test custom power plants and power trains	4	20
18171	Demonstrate knowledge of spars and rigging	3	5
23049	Demonstrate knowledge of composite technology for boatbuilding	4	6
25152	Apply 2D CAD/CAM in boatbuilding	4	5
25154	Prepare for and apply a marine interior coating system	4	8