♣ PENDENNIS

VOYAGE





3 YEARS



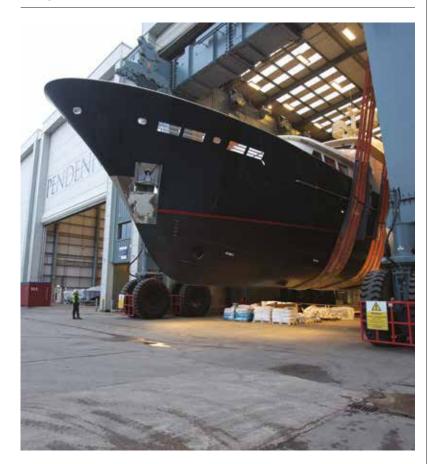
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CONTENTS

- 2 Business News
 The latest updates from Pendennis
- Pendennis Vilanova
 Technical excellence in the
 Mediterranean
- 12 Community News
 Staff wellbeing initiatives,
 awards and events
- 14 *Marala*A restored classic
- 22 Pendennis Falmouth
 A full service facility
- 26 Apprenticeship Update
 The benefits of a new structure
- 30 Sustainability
 Responsible choices for a better future
- 36 Our FacilitiesWhat we offer at PendennisFalmouth and Pendennis Vilanova

BUSINESS NEWS

REBUILD



REFURBISHMENT MARKS 10-YEAR ANNIVERSARY

A2 re-launched in January 2022 following a four-month programme of works. This included a 10-year class survey, a major engine room systems service, guest and crew interior upgrades and an exterior refurbishment including full deck re-caulk and a re-paint of the hull.

2022 marks the 10-year anniversary since she was relaunched following her first visit to the shipyard. Originally *Masquerade of Sole*, she was refitted by Pendennis in 2012, extended to 47m and left the yard as an award-winning rebuild.

REBUILD



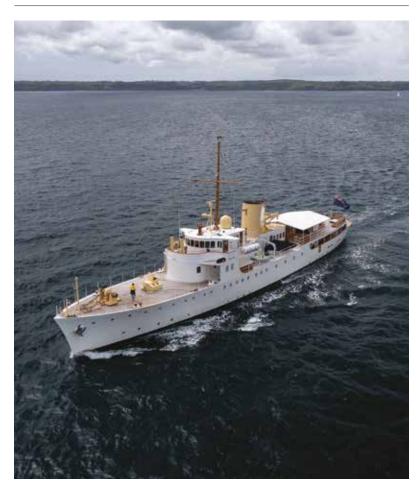


SEAWOLF'S REBUILD BEGINS

58m expedition yacht *Seawolf* is currently at our Falmouth facility for an extensive rebuild project. The programme of works will include new interiors throughout, exterior styling modifications, extensive engineering and electrical work and a full repaint of the hull and superstructure.

Turn to page 33 to find out how industry-leading technology will reduce *Seawolf's* emissions.

RESTORATION



CLASSIC YACHT MARALA IS ON THE WATER AGAIN

Following a meticulous programme of works spanning more than two years, the restoration of 1930s classic yacht *Marala* is now complete. The 59m motor yacht, originally built by Camper and Nicholsons, successfully underwent sea trials in Cornwall in May.

The project involved a careful blend of sympathetically renewing and upgrading, all the while preserving original features and honouring the yacht's fascinating history. Our in-house Class and Flag team liaised closely with both Lloyd's and Maritime Cook Islands to ensure a successful result in an extremely technical historic restoration.

Preserving these historic yachts by balancing traditional craftsmanship with modern technology is a passion that has become a signature of Pendennis. Discover more about *Marala's* restoration on page 14.

REFIT



WINTER WORKS Complete

La Mascarade visited Pendennis for a substantial winter programme of works including her 25-year class survey and installation of two new generators. "This is La Mascarade's first refit with Pendennis and having all in-house trades has been a real benefit for us in the current climate. It was their wide in-house skills base that attracted us to Pendennis in the first instance and the refit has gone well as a result." her Captain commented.

BUSINESS NEWS

REFIT



ENGINEERING EXCELLENCE ONBOARD NGONI

One of the world's largest sloops, *Ngoni* first became a Pendennis client following several visits to our Mediterranean base at Vilanova. She then visited the Falmouth shipyard for her 5-year Lloyd's Special Survey and to undergo a planned engineering maintenance period.

REFIT





SLIPSTREAM REFRESH

60m motor yacht *Slipstream* arrived at Pendennis in October 2021 for a major exterior repaint programme. In addition, during her time at our Falmouth facility

she underwent engine and generator servicing, interior electrical works, tank cleaning and a light refresh to some of the guest areas onboard. REFIT



PIONEERING MATERIALS WITH ATAO

Housed in one of our construction halls for an extensive refit period over winter 2021/22, *Atao* was relaunched at the end of May. Works included a new deck, full exterior paint, varnish to her deck house and an AV/IT upgrade as well as a 15-year rig service. You can read more about the pioneering materials used in the project on page 30.

DIGITAL COMMUNICATIONS

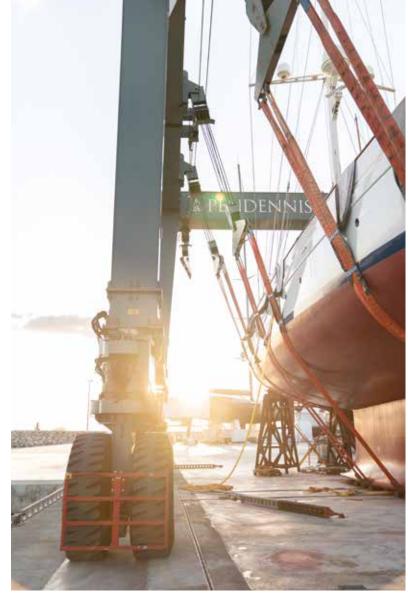


OUR NEW WEBSITE

We were excited to launch a new website for Pendennis and would love to know what you think – take a look and let us know. You can also sign up for our monthly e-newsletter and stay current with our business news.

pendennis.com

GLOBAL SUPPORT



PENDENNIS VILANOVA

It's been an exciting few years at our Mediterranean base near Barcelona, with continued development of the facilities, the hosting of our first major event and the appointment of our new General Manager, Miguel Lliteras.

Following the announcement that Barcelona will host the 37th America's Cup in 2024, we've

been working on plans to support the superyacht fleet during the event. With this and plans to host another event of our own in October 2022, the region looks set for a busy time ahead.

Read more about Vilanova and our global yacht support options on page 6.



GLOBAL EXCELLENCE

In the five years since Pendennis' investment into Vilanova Grand Marina, a 48 berth superyacht marina just outside of Barcelona, the facility has evolved into an outstanding addition to our global yacht support network.



evelopments began with construction of a Technical Service Centre, opened as Pendennis Vilanova in 2019. The first phase created 12,000m² of hardstanding on previously unused land adjacent to the marina. The 620t travel hoist from Pendennis' Falmouth facility was shipped out to Vilanova, joining the marina's 200t hoist to increase haul out capabilities at the facility – meanwhile in Falmouth, Pendennis took delivery of a new 800t hoist in order to lift still larger vessels.

Since its opening in Autumn 2019, Pendennis Vilanova has been the company's primary Mediterranean base, focusing on small to medium refit works, surveys and technical pit stops for yachts between 25-130m. Later works included renovation of onsite workshops and the second phase of construction, finished in time for the 2021 winter season, which consisted of upgrades to the hardstanding. New concrete was laid, some replacing older concrete and some converting soft ground to increase the total hardstanding area. The entire area within the shipyard perimeter is now a newly laid high-

quality surface which can accommodate up to 35 yachts at a time.

The location – just 45 minutes from the centre of Barcelona and 30 minutes from the city's international airport – makes Vilanova an easy pit stop or ideal home base for exploring the Mediterranean. All the well-loved cruising destinations are within easy reach, plus the area has its own important standing for superyachts in the region. In March of this year it was announced that Barcelona would host the 37th America's Cup in 2024, the first time in 14 years that the prestigious event will have a European venue.

Pendennis Vilanova is now a premier destination for yachts seeking technical work in the Mediterranean. The proximity of the Technical Service Centre to the 48 berth superyacht marina means projects can be carried out both on the facility's 30,000m² of hard standing or afloat in the marina itself. The partnership also offers clients the ability to either self-manage or utilise the team of in-house tradespeople during their stay, with many projects choosing a combination of the two options.

6 —— PENDENNIS VILANOVA VOYAGE 2022/23 PENDENNIS COM

There are further exciting developments in the facility's future. Phase three of Pendennis Vilanova's construction started in July 2022, building a paint facility which includes a state of the art spray booth with office and training space above. Scheduled for completion by the end of the year, the new facility will be a great enhancement of the existing paint capabilities. The 14 x 7m spray booth is accompanied by 230m² of preparation and painting work area, allowing for painting of small yacht sections, components and tenders without the need to erect tents or send items off-site.

After hosting our first major event as a combined facility last year – The Future of Mentorship Onboard, in partnership with ACREW – we were delighted to announce that a second edition will take place in October 2022, with guests once again welcomed for three days of talks, workshops and social activities. September and October of 2024 will bring the America's Cup, and with enquiries already coming in for marina berthing during the event, the area's reputation as a cosmopolitan hub for the yachting community looks set to be ever-increasing.







WHAT OUR CLIENTS ARE SAYING

We originally planned to spend just ten days at Vilanova Grand Marina, Barcelona as part of our cruising and maintenance schedule. During our stay we found the marina to be a fantastic base for us in the Mediterranean and we extended our berthing plans, opting to keep our berth at the marina for four months in total. As well as being in a convenient location close to Barcelona, the onsite Pendennis Technical Service Centre is an added benefit – we received some minor support work during this visit but I know that if we had needed any more, the team were on hand us and they were helpful in quoting on a few larger jobs while we were there. Having one point of contact for both the marina and the technical services definitely simplifies things. From a client perspective, it's all about clarity - arrivals, ongoing communication, billing and any support we required - it was all very easy for us. We hope to return to Vilanova during our next cruising season."

CAPTAIN, 90M MOTOR YACHT

CONTINUITY OF CARE

A large proportion of the Vilanova team have worked for Pendennis at our home base in Falmouth. Kirk and Justin's stories demonstrate how this transfer of skills and experience ensures continuity of care across both locations.





KIRK OLDFIELD

Project Manager

Kirk joined Pendennis as a surface finishing apprentice at the Falmouth site in 2005. After graduating from the four-year apprenticeship, he progressed through the paint team to a supervisor role.

In 2011, Kirk journeyed to Palma, Mallorca to assist the opening of Pendennis' new technical refit office and workshop. He spent a year's secondment helping to establish Pendennis Palma and completing paint works on various vessels, and on returning to Pendennis in Falmouth he was made a paint specialist and eventually manager of our interior finishing department. By this stage in his career he had completed extensive travelling for the company as part of our global yacht support services, to locations including Newport, Connecticut, Toulon, San Remo and Monte Carlo.

Making the move from finishing into project management in 2016, Kirk worked on several projects in Falmouth before relocating to Pendennis Vilanova. He has been a Project Manager at the Technical Service Centre since November 2020.

JUSTIN BROOMHEAD

Mediterranean Paint and Finishing Manager

With an established background in all aspects of painting, fairing and workforce training, Justin joined the Pendennis team in 2006 as a Lead Hand on the paint team. He was promoted to Supervisor and then in 2012 to Manager of the paint department. In 2016 he sought out the role of Paint Apprentice Manager, working closely with Cornwall College to train groups of up to 10 apprentices per year through our four-year Yacht Painting Apprenticeship, while continuing to collaborate on and oversee projects in the paint department.

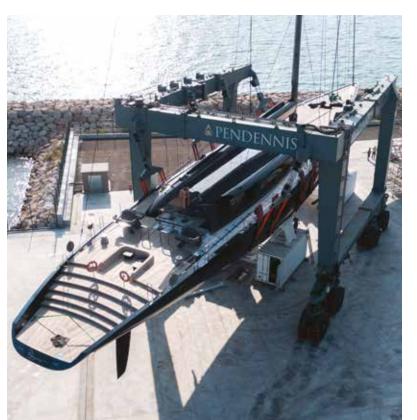
Justin has now relocated to Pendennis Vilanova to become our Mediterranean Paint and Finishing Manager. He has overall management and responsibility of all paint activity, QA and procurement plus liaison with paint contractors for overall organisation of all paint works, as well as paint workforce recruitment and mentoring. Drawing on the success of Pendennis' long established apprenticeships in Falmouth, Justin is currently training two paint apprentices in Vilanova.

8 —— PENDENNIS VILANOVA VOYAGE 2022/23 PENDENNIS.COM

A TAILORED EXPERIENCE

A selection of past and current Vilanova projects demonstrates how our offering can be tailored to suit any yacht's requirements, both in the flexibility of our facilities themselves and in the way any yacht can utilise our global support network.





NGONI

58m high performance sloop

The first yacht to be lifted and placed ashore by our 620t capacity travel hoist in winter 2019, Ngoni received paint works provided by Pinmar along with various maintenance works supported by our onsite technical trades team. After this first introduction to Pendennis, Ngoni then visited our main base in Falmouth for her 5-year Lloyd's Special Survey and a planned engineering maintenance period in winter 21/22. She has since made frequent short stopovers in the marina, utilising Pendennis' onsite expertise for minor technical support.



FAIR LADY

42m classic motor yacht

Fair Lady visited Pendennis Vilanova in January 2020 for a five month programme of winter works. She was hauled out onto the hardstanding for the project which included class survey works, a full underwater blast and re-application of paint system, and removal and servicing of the mast and spars. The 42m classic yacht was already a longstanding Pendennis client, having completed a restoration at the Falmouth facility in 1996 plus two smaller refits in 2000 and 2006.



ADELA

55.5m schooner

Adela has made regular use of Vilanova as a Mediterranean service base since 2019. On her first visit she berthed in the marina and received technical assistance from Pendennis' engineering and electrical teams while afloat. Later that year, she hauled out for a general maintenance period including anti-fouling, tank cleaning and servicing of various mechanical equipment. In October 2021 her mast was de-stepped and laid out for servicing on our spacious hardstanding.



FARFALLA

32m sailing yacht

Farfalla received technical assistance while afloat in spring 2019. She then returned for haul out in autumn of the same year for pre-Caribbean technical works, receiving a brand new generator, serviced thrusters and furlers, engineering refurbishment and general maintenance before departing to Antigua for Caribbean season. In subsequent years she has utilised the facility for pre and post-Caribbean pit stops, winter storage and berthing.

COMMUNITY NEWS

STAFF WELLBEING



STAFF WELLBEING AND BENEFITS

Pendennis has been running a
Health and Wellbeing scheme
for several years which gave
staff and yacht crew the option
to use our onsite gym and attend
exercise classes for a monthly fee.
We recently made the decision
to make these services free for
all staff and to include several
existing sports clubs under the
Health and Wellbeing umbrella,

including football sessions and the Pendennis cricket team.

One newly established club was added to the offering too – the Pendennis sailing club. Meeting every week and open to staff and crew of any level of sailing ability, the club sails Laser and and Laser 2 boats owned by Pendennis and refurbished by two of our graduate trainees, the organisers of the club.

AWARDS

We were delighted to win several awards for our training and apprenticeships in 2021 and 2022.

FE Week and AELP AAC Apprenticeship Awards, 2021 Apprentice Employer of the Year (Small Employer)

South West Apprentice Ambassador Network Awards, 2021

Pendennis received the Gold Service Award from SWAAN, and our Training Manager Steve Hancock won 'Apprenticeships Champion' for his personal commitment to the schemes.

UK Government's Top 100 Apprenticeship Employers 2022 We were listed at 66 in the national list, selected from over 500 employers.

Cornwall Business Awards, 2022 Skills Brilliance Award



The Queen's Silver Medal by The Worshipful Company of Shipwrights, 2021

Pendennis won 'The Company Prize' due to our strong representation and the support for our apprentices. We were honoured to be receiving the award for the third time, with previous successes in 2012 and 2010. Harrison Chivers joined the list of Pendennis apprentices to have received individual honours in the competition with his award for Most Notable Endeavour.

APPRENTICESHIPS



APPRENTICE RECRUITMENT

Pendennis' award-winning apprenticeships reached a new milestone as we enrolled our 300th apprentice since the schemes were founded in 1998. The most recent intake of General Engineering apprentices joined the team in July, with Yacht Painting apprentices due to start in September.

AWARDS



THE DUKE OF EDINBURGH'S AWARD

Four of our recent apprentice graduates attended a celebration at Buckingham Palace to mark their completion of The Duke of Edinburgh's Gold award.

Meanwhile, our younger apprentices were just beginning their awards with hikes on Bodmin Moor and Dartmoor.

EVENTS



THE SUPERYACHT ASHES

After a three-year break, we were pleased to welcome industry professionals back to compete in the Pendennis Superyacht Ashes. This became the fifth edition of the event, which brings together designers, brokers, yacht managers and people from yachting media for a friendly cricket tournament and accompanying social events.





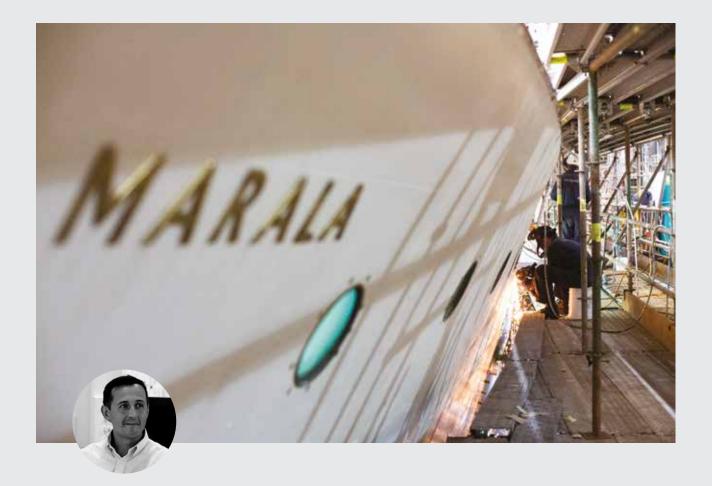
Built by Camper and Nicholsons in 1931, Marala celebrated her 90th birthday while under restoration at our Falmouth facility. When she arrived at the shipyard in August 2019, she still had her original layout and engines, and some original features survived – something which could be attributed to her relatively small number of Owners for her age. Where they were small in number, they were large in personality. Each Owner put their own stamp on the boat in the form of modifications to her interior and superstructure, in the process becoming part of her story forever.

Her new Owner wanted her restoration to capture her 1930's spirit but honour the rest of her history, not erase it. As much as possible was to remain original, and the rest of it to be kept in the spirit of the vessel's history. Knowing that essential structural requirements would cause disruption that would necessitate a replacement of her interior, the logical step was to address much needed engineering updates before reinstalling it. Decades old domestic systems and cabling would be replaced with modern equipment and use modern engineering methods. In the spirit of restoring her original character, amendments would be made to her profile to undo some of the modifications made over the decades and return her lines closer to original design. Her recently rebuilt original engines would be kept, but the power train refurbished. London based design house Muza Lab were commissioned to bring a new look to the décor that would both respect and celebrate the heritage of the vessel.

As is so often the case with a classic yacht restoration, it's difficult to understand the full scope of the work required until it can be uncovered and investigated. That's something Project Manager Nick Kearton knows only too well, having also been the project manager for the restoration of *Haida 1929*.





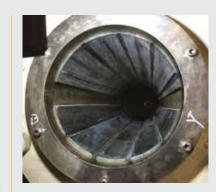


ENGINEERING FOCUS

TIM FEATHERSTONE-HARVEY

"When we removed the staves of Marala's stern tubes to assess the steel around them, they were unable to be re-used due to wear and age. The standard way would have been to replace with a modern material, but we knew that the ethos of this refit was to use traditional methods and materials wherever possible. We did life calculations comparing the durability of replacing with traditional Lignum Vitae vs a modern material. With the results we estimated that Lignum Vitae could exceed sixty years, whereas a modern material may need to be replaced as early as every five.

The wood was sustainably supplied by Lignum Vitae Solutions in Florida The staves come slightly oversized and must then be press fitted into the housing and trimmed to suit. You tap the last one in almost like a keystone on a bridge. If it's too tight, you plane a bit more off and try again, and keep going with that process - once it's a precise fit it holds everything there perfectly. The skills are similar to shaving in the last plank on a wooden hull, so as well as the excellent advice from Lignum Vitae Solutions, we also did plenty of research into traditional boatbuilding methods. Several of the team come from generations of shipwrights so they were able to consult their fathers and grandfathers on the process, which was fantastic. An extra complication is that the Lignum Vitae must be saturated throughout the whole process, otherwise it dries and contracts, ruining the fit and damaging the wood.



LIGNUM VITAE

"It's satisfying to think that during the restoration we ranged from 90 year old skills like planing in wooden bearings, to hundredths of a mm precision and laser alignment equipment when realigning the engines – a real meeting of tradition and technology!"

Tim Featherstone-Harvey Lead Project Engineer

6 —— MARALA VOYAGE 2022/23 PENDENNIS.COM







"When Marala arrived in Falmouth, the crew were just finishing removing the interior which had been in place since the 1950s, and behind that interior was everything that had been covered up by the fabric and timber that was in there. The usual suspects – leaking air conditioning equipment, leaking portlights, lack of insulation – had all contributed to a relatively poor state of health, particularly the tank tops and deck plates where water had accumulated. By bringing the interior out and allowing the areas to be cleaned up and grit blasted, the full picture presents itself and you can then see the state of play. So, the early part of the refit was mostly spent identifying anything that was unsuitable and needed replacing."

"We were able to preserve a significant amount of her original riveted construction, however a lot of the shell plating needed replacing – tank tops, margin plates and hull plate. The amount of unexpected steel work was a challenge, but that's the great thing about Pendennis – we have all of our trades under one roof so we are able to replan around emergent work. We can essentially mould the programme into whatever shape suits the priorities of the refit at the time. There were things we were expecting to find issues with - known

unknowns is what we call them – and then there were a few unknown unknowns that came out as well."

One of these unknowns was the shaft alignment. Replacements to the steelwork have a knock on effect on the alignment of the vessel, so once the work on the hull had been completed it became clear the power train would need to be realigned. This process uncovered yet more engineering work, like replacing Marala's Lignum Vitae stern tube bearing arrangement, an original from from 1931.

Another huge event in the world's history has become woven into Marala's story, as Nick explains;

"It has been talked about a lot, but the pandemic had such a massive impact on every element – supply chain, labour, client interface. We adapted and overcame the challenges. We had to learn new skills and find ways of liaising with suppliers and technical specialists to come up with solutions, such as hosting interactive walkarounds, when they couldn't come on board - all the while liaising with the Class and Flag team to keep things moving. We worked very closely with Muza Lab, the designers, as the pandemic hit right at the point where their designs were going from concept to reality and there are inevitably things that need to be adapted during that process. >>



DESIGN FOCUS

MUZA LAB, INTERIOR **DESIGNERS**

In Marala's 90+ years of illustrious history, several performances have graced the stage that is this grand dame, each with its curious cast of characters. It is this rich heritage, specifically the times full of optimism and heady glamour, that Muza Lab sought to honour in their design direction.

Far from an interior restoration project, this new chapter was about reinvigorating Marala's 1930s spirit and preserving her aura for years to come. Muza Lab extensively researched her history, beginning with the original design spec and blueprints from the National

Maritime Museum archives in order to develop an understanding of her heritage and character.

Nathan Hutchins, Muza Lab Co-Founder, explains;

"Marala is an extraordinary vessel with so much history, so many stories to tell and many layers of details. There are references to the ship's history in each cabin with moulding detail, textiles and carpets each representing an individual era of the owner of the time.

Original concepts such as rounded edges, soft deco lines and plenty of brass were reintroduced throughout. Gatsbyesque glamour is dialled up in the main deck areas, especially in the Main Saloon with its skylight, exquisite straw marquetry and working fireplace while the luxurious formal dining area features a striking Macassar Ebony custom-made dining table.



THE EXTERIOR

The exterior is very clean, classic looking and crisp with plenty of versatile seating and intimate sheltered areas. Marala's cocktail bar could speak a thousand stories and has been designed in the form of a teak treasure chest filled with tantalising treasures."

Muza Lab Co-Founder

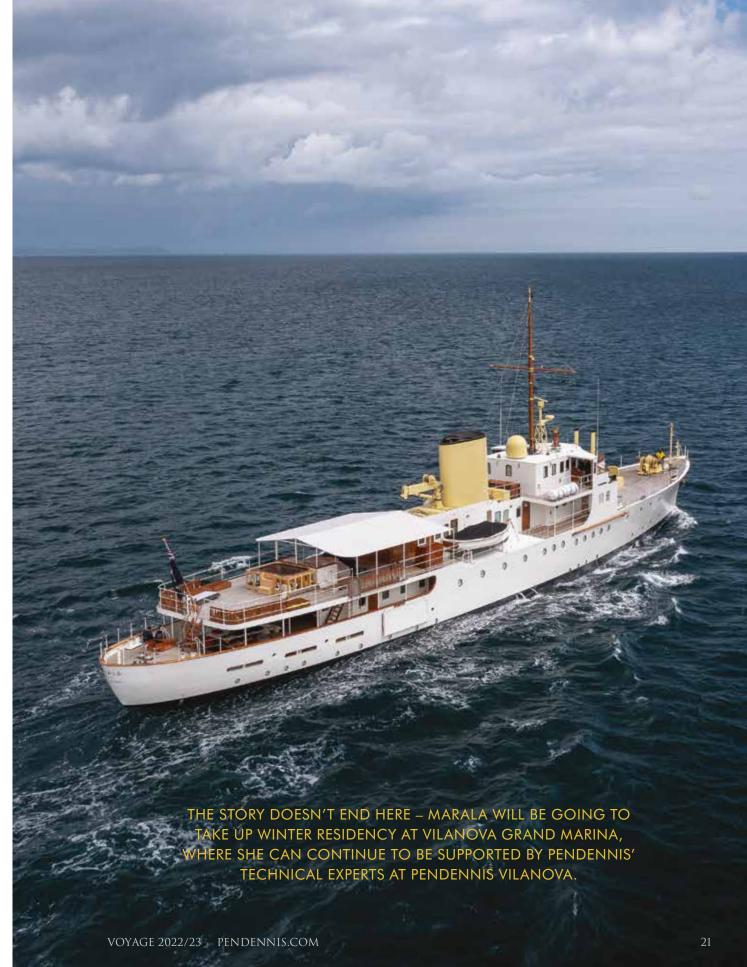
Nathan was very responsive – we all embraced the new methods. The biggest challenge with fitting everything in the boat was working around the sheer and camber, managing that balancing act to fit in all the necessary systems without losing too much headroom."

The whole of *Marala's* restoration project has been guided by two principles – a passion for her history and great attention to detail. Historically authentic materials were used wherever viable. As much as possible of the original timber has been kept, including the beautifully aged floorboards in the dining area and saloon, which Nick is particularly enamoured with. "On the main deck and Owner's deck, the original deck timbers were removed, re-machined and reinstalled. It created a fantastic look because although they were machined flat you can still tell that they are original timbers, so you really feel the history of boat."

The exterior works, undertaken to bring her closer to her original profile, have also much improved the view from the Owner's cabin and allowed increased natural light to shine in. There are carefully considered technical improvements too, for example loose ballast replaced with lead poured into keel tanks to lower centre of gravity and improve stability.

"Seeing the end result now, I do feel it's up there with some of the best in the world. Personally, it felt great to do an entire fit out of the luxury space all under Pendennis' in-house capabilities. The guest cabins, bridge, all the luxury areas, along with all the electrical services, domestic plumbing, fixed firefighting – all technically designed, built and installed by our inhouse team. That was great, both logistically during the process and as a matter of pride now that the restoration is complete."





20 — MARALA VOYAGE 2022/23 PEN



A WORLD-CLASS DEVELOPMENT

In recent years we have undertaken a significant programme of development onsite, including the creation of our non-tidal wet basin, new 90m and 45m construction halls and the upgrade to our 800t travel hoist. This evolution has enabled us to haul out larger yachts and provide pre- and post-project in-water services right in the heart of the shipyard, which equates to efficiency and convenience for our clients.

The 7,564m² of enclosed non-tidal wet basin allows for seamless arrival and departure. Multiple covered and uncovered storage options are then available to tailor any project to individual needs.

Our 14 acre site in Falmouth offers diverse and flexible options for yachts seeking refit work.



HAUL OUT ONTO THE HARDSTANDING

Our 800t travel hoist can haul yachts from the wet basin straight on to our large area of reinforced hardstanding.

For yachts requiring just a short pit stop, maintenance work or technical support, storage on the hardstanding is a convenient and cost-effective option. The space available also allows for container storage, temporary workshops and offices so that crew and project staff can work right beside the yacht. There is ample room for mast movements, with our 80m mast spray hall located in the adjacent construction hall complex and the option to store the mast on the hard. Returning Pendennis clients *Adela* and *Constance* have both taken advantage of these hardstanding and storage options on recent visits.

At a glance

800T TRAVEL HOIST

80M MAST SPRAY HALL



PRE AND POST-PROJECT WORKS ALONGSIDE

With 380m of alongside berthing, the wet basin offers superyachts of up to 100m LOA a secure and controlled environment for preparatory work, post-refit commissioning or finishing touches.

It can even be a place for a quick pit stop for repair or technical works afloat.

At a glance

380M OF ALONGSIDE BERTHING



FLOAT INTO THE DRY DOCK

Large motor yacht projects use our flexible 150m undercover dry dock. Yachts over 75m – such as 85m *Aquila* – can have the whole space to themselves, or a central gate can divide the dock to house two smaller projects independently, as in the case of 59m *Marala*. Supported by workshops and offices in the adjoining refit complex, the dry dock forms an integral part of our specialist refit facilities.

Once flooded up, the dock provides direct sea access which allows yachts to relocate to the wet basin for finishing works afloat or head straight out to sea trials and return to the basin for commissioning.

At a glance

FLEXIBLE 150M UNDERCOVER DRY DOCK

HAUL OUT INTO CONSTRUCTION AND REFIT HALLS

The hardstanding connects the wet basin to our 45m and 90m construction and refit halls. Yachts under 800t can haul out directly into these environmentally controlled facilities, providing unrivalled access from deep sea to dry storage. Built to BREEAM (Building Research Establishment Environmental Assessment Method) excellence, the halls are perfect for projects requiring more indepth refit work, such as 47m A2, who was housed in a hall during her most recent visit to Pendennis. Between the halls, a central spine houses workshop space for multiple trades as well as offices for project managers, project engineers and technical staff to work in direct proximity to the project. The mast spray hall is located here, with storage rooms on the upper floors. Container storage can also be added to each hall.

At a glance

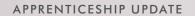
1 X 45M AND 2 X 90M CONSTRUCTION AND REFIT HALLS

YACHTS UNDER 800T CAN HAUL DIRECTLY



Our world class facilities are backed up by over 450 in-house tradespeople onsite, providing a comprehensive offering to meet any yacht's requirements.

4------- FALMOUTH FACILITIES VOYAGE 2022/23 PENDENNIS.COM



TO THE HIGHEST STANDARD

Our world-renowned apprenticeship schemes continue to go from strength to strength, with over 300 trainees having enrolled on the schemes since our first intake in 1998. Recent updates to the course structures have created even more chances for apprentices to train in real-life scenarios, with dedicated mentorship from our highly skilled tradespeople.



here have been nationwide changes to the way apprenticeships are structured over the past few years. Where they were once designed and assessed by the learning provider, government mandated changes which came into effect in 2020 required the bulk of this to be done by employers instead. This led to collaborations between major UK superyacht builders and marine companies as they worked together to redesign marine apprenticeships.

For any apprenticeship to continue after the changes came into effect, a group of at least 10 employers from the occupation needed to work

I want them to be able to

into the workplace.

First Year Apprentice Co-Ordinator

JOHN ANGOVE

together to develop the new structure, and have it approved by IFATE (Institute For Apprenticeships and Technical Education). Pendennis' Training Manager Steve Hancock, chaired the surface finishing apprenticeship group (a collaborative team which included Berthon Yachts, Sunseeker, Cockwells, Princess Yachts and the RNLI) as well as contributing

and Pipe Fitting.

"The new standards cover more specific criteria than the old frameworks and having been designed by us, they are completely tailored to the marine industry. Our group worked on the Surface Finishing standards with British Marine and IFATE for well over a year and were able to design a course specifically for high-end marine surface finishing – a first for the industry, where all previous qualifications were adapted from other courses. Both the Surface Finishing and General

Engineering courses are now structured around their respective new standards, and we're already seeing

to several others, including Marine Engineering

In previous years, first year Pendennis apprentices spent the entirety of their term time at college, with placements in the shipyard during the summer months. The updated structure has been designed so that the first year consists of three days per week at college and the remaining two days in the shipyard.

years, John Angove was offered the new part-time role as he approached retirement.

> "I think the new course structure has been greatly beneficial. It's surprising how much extra they can learn in those two days in the working environment. It's a bit more at the coalface than when they're

full time in the trades. The other thing it does is build their confidence earlier, having the chance to start meeting people, gaining communication skills and getting hands-on experience. I see myself as bridging the gap between college tutors and the shop floor -I didn't want to be purely a teacher figure, more of a mentor, colleague or friend – I want them to be able to talk to me and come to me with concerns. I'm not just helping them learn the skills but also helping them settle into the workplace."

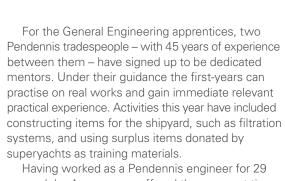
During the first year under the new apprenticeship including being named in the UK Government's Top Brilliance Award at the Cornwall Business Awards.

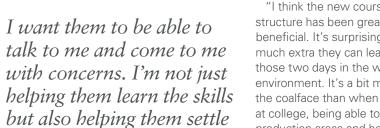


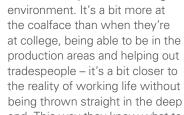




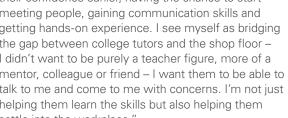












structure, Pendennis received multiple accolades for our apprenticeships and commitment to training, 100 Apprentice Employers list and winning the Skills As the first group move up into the second year and a new intake of Engineering apprentices begin their first year, we expect to see the changes continue to benefit our learners and the company.



huge benefits from the changes."



A GROWING FOCUS ON SUSTAINABILITY

n an industry which both impacts and relies on healthy oceans, designers, builders, suppliers and our clients are in a powerful position – as with any market, the consumer creates demand, and the consumer can also drive change.

Many in an increasingly environmentally conscious yachting community are moving towards more sustainable options and responsible choices. Innovative designs and products are able to improve the performance of a boat but can also lessen its impact on environment – the ideal scenario would be the two working in parallel.

The quest for sustainability is forging a path for creativity and inventiveness in the industry, and in turn giving decision makers an opportunity to lead the way towards a better future.

PROJECT FOCUS — ATAO

Environmental, humanitarian and political issues surrounding traditionally slow-grown teak have necessitated a global search for a better option. There are now several choices available, some made from alternative materials and some investigating more sustainable ways of using and sourcing teak. For 25m sailing yacht *Atao*, the solution chosen was to use engineered plantation teak from Thailand, retaining the benefits of teak without the ethical issues of using solid, traditionally grown and sourced cut planks.

"I first obtained samples of "Greenteak" in 2015 and thought it a clever and elegant way to use smaller teak logs from plantations and create the long lengths and wide boards we need in yacht building. However, I'm always sceptical of new products so first put a sample on the roof of our workshop to see how it would stand up to the Mediterranean sun. I was pleasantly surprised, and to this day, that sample shows no sign of delamination or decay.

Wood is a wonderful material; beautiful, tactile, entirely natural, with limitless possibilities on how it can be worked and shaped. Another credential should be that it can be grown and harvested sustainably. Sadly, this is often not the case and in Myanmar (Burma), the main source of yacht-grade teak, clear felling of ancient forest has continued for decades, whereas in neighbouring Thailand and Indonesia, genuine efforts have been made to stop deforestation.

Whilst previous clients have expressed concern about the sustainability of old-forest grown Burmese teak, they've invariably chosen to use it anyway as the tried-and-tested decking material. *Atao's* Owner has shown genuine courage and foresight by choosing "Greenteak" as the decking material for his elegant yacht."

ROBERT ELDRIDGE

Ocean Refit

IMAGE Atao passes Pendennis Castle on sea trials in Falmouth

50 ——— SUSTAINABILITY VOYAGE 2022/23 PENDENNIS.COM

Superyacht carpentry and decking specialists Ocean Refit were the contractors who sourced, supplied and fitted the laminated teak. The product is made from sustainably grown teak, produced on FSC certified plantations in Thailand. It is kiln dried and sliced into thin veneers which are then fused together to give high performance, engineered boards. The resulting visible lines give the visual appearance of wood grain on the deck. Not only are the trees more sustainably grown, but the way the boards are constructed considerably saves wastage as much more of the tree can be used.

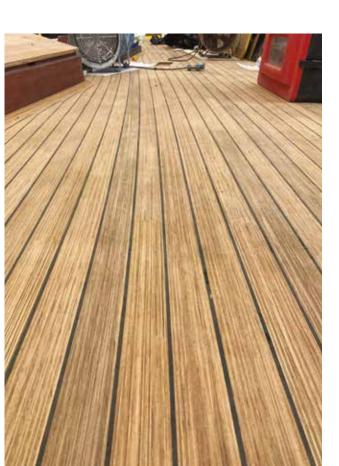
Time is running out on the use of old-forest grown teak and a solution has to be found, not just for us as a company, but industry-wide and even globally. When a change is needed, someone must be bold enough to be the first – and we are excited to be a part of it.

With a focus on sustainability, Pendennis has been looking at alternative teak decking solutions for some time and are excited to have had the opportunity to fit the Greenteak solution on sailing yacht *Atao*. Finding alternatives is one thing but having the support of the client makes a workable solution that much easier to execute.

The appearance of the finished deck respects the traditional design and heritage of *Atao* and we are very impressed with the end result."

NIELS VAN DINTHER

Pendennis Project Manager







IMAGES FROM LEFT Atao's new engineered teak deck (image provided by Ocean Refit), Pendennis'

800t hoist transfers *Atao* from refit hall to wet basin, *Atao* on sea trials in Falmouth



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Pendennis Principal Marine Engineer Andy Platt helped shape the proposal:

"When we first tendered for Seawolf's refit, one of the potential jobs was to install a shaft generator on the gearbox power take off (PTO). That had sparked my interest because I'm very interested in hybrid drives; I feel it's the way forward for the industry in many ways. I later came across a unique permanent magnet drive motor and thought it would have been perfect for Seawolf, as it's smaller than other electric motors and would fit the tight constraints of the installation. When the vessel arrived for the refit further down the line, I got word that the Owner had reopened the shaft generator enquiry. I was delighted, you know – I'd already designed the whole thing in my head! So, I got back in touch with the permanent magnet motor supplier for more details and we started putting the package together."

To achieve the client specified requirements a new propeller will be required, custom designed to match the available power of the engine and shaft generator working together.

"This has been designed by Teignbridge Propellers and we expect the new propeller will give a fuel saving of around 4% over the original one."

We're hoping to get between 7-8 knots under electric propulsion. The end result will add a lot more flexibility to a very old power train set up which was designed to tow large commercial ships on long ocean voyages. To do this as a conversion is quite unique; there are other diesel electric superyachts out there, but they are generally new huilds.

ANDY PLATT

Principal Marine Engineer

IMAGE Seawolf arrives into Falmouth

The power produced by the shaft generator needed to be integrated into the electrical systems of the boat, as described by Chris Newman, Pendennis Electrical Project Engineer:

"Magnus Marine will be providing an inverter that will take power from the shaft generator and convert it into the required voltage and frequency to power the vessel. A lot of those modules will also double up as the shore power unit, so we're able to combine part of the PTO scheme into the shore power unit as obviously we won't need the PTO at the same time as the shore power. Alewijnse will be pulling a lot of the individual elements together in their switchboard so their power management system will control how the various system elements service the vessel's power requirements."

Another piece of the install will be a battery bank which can be charged from the shaft generator, giving the ability to run emission free for as long as the size of the battery bank will allow. Chris says:

"We investigated a number of different technologies that are available from different suppliers, ultimately opting for a European designed and manufactured product which is smaller than other options, cost effective and efficient."

The battery bank will be able to power the boat overnight at anchor, allowing the Owner and guests to enjoy the surroundings without engine or generator noise as well as reducing the boat's impact on the environment. Having a battery bank installed also allows

for peak shaving – at high power loads the battery power can be called upon to cover anything one generator can't handle alone. This saves the need to operate a second generator, which of course saves fuel and emissions.

For Andy, an exciting aspect was that with just a few modifications in the system, the shaft generator could also be capable of implementing drive to the gearbox to give propulsion. This would give from zero to the full 200kw manoeuvring ability in and out of ports and the ability to motor without the main engines running. He explains:

"The vessel has two main engines that are direct drive, with no reversing gear box. Currently, to come into port they must have one engine running ahead and one astern and they clutch in the relevant one to go ahead or astern - which is very difficult to do carefully and gently. That didn't matter when she was a tug, but it doesn't work for entering a superyacht marina. With the new set up they will have the ability to enter port quietly and with perfect control. It also gives them the option to leave the main engines off and go diesel electric with their generators – we're hoping to get between 7-8 knots under electric propulsion. The end result will add a lot more flexibility to a very old power train set up which was designed to tow large commercial ships on long ocean voyages. To do this as a conversion is quite unique: there are other diesel electric supervachts out there, but they are generally new builds. Taking a 1950s tug and making it a diesel electric hybrid - that's pretty cool in my opinion."



IMAGES FROM LEFT Seawolf's current propeller and shaft



34 —— SUSTAINABILITY VOYAGE 2022/23 PENDENNIS.COM 35

OUR FACILITIES

FALMOUTH

TO DISCUSS YOUR NEXT FALMOUTH PROJECT, PLEASE CONTACT:

+44 (0)1326 211344 or info@pendennis.com

Pendennis Shipyard Ltd, The Docks, Falmouth, Cornwall TR11 4NR

Pendennis Falmouth is a full-service facility capable of building fully custom yachts, as well as undertaking substantial restoration and remodelling projects or routine class and flag refit works. Occupying a 14-acre prime waterfront location in Falmouth, UK, the yard's modern facilities include three bespoke-built construction halls (2x90m and 1x45m) alongside a 150m dry dock, with the capacity for both new build and refit contracts for 30-100m superyachts. The 800t travel hoist enables efficient launching into the 7,500m² non-tidal wet basin, which is purpose-built to accommodate superyachts of up to 100m.

BARCELONA

TO DISCUSS YOUR NEXT PENDENNIS VILANOVA PROJECT, PLEASE CONTACT:

+34 680 903 749 or vilanova@pendennis.com

Pendennis Vilanova, Moll de Ponent, SN, 08800 Vilanova I La Geltru (Barcelona) Five years ago Pendennis announced a major investment into Vilanova Grand Marina Barcelona, enhancing the yard's long-term yacht support offering to the superyacht fleet in the Mediterranean region. Pendennis Vilanova is Pendennis' main base in the Mediterranean and concentrates on providing technical service support to both existing clients and the wider fleet. The development of the technical service centre, which includes 30,000m² of hard standing and both a 200t and 620t travel hoist, means projects can be carried out on the hard standing or afloat in the marina itself.











FALMOUTH

- 2 x 75m fully enclosed dry docks (or one 150m x 24m)
- 2 x 90m construction halls (1,800m²)
- 1 x 45m construction hall (1,200m²)
- 7,564m² of enclosed non-tidal wet basin

- 800t travel hoist
- 1400m² refit complex (housing paint, joinery and engineering workshops, and project management offices)
- Bespoke 80m mast hall
- 200m² finishing workshop

PENDENNIS

- 1200m² general stores and crew storage
- Crew facilities: training centre, gym and offices
- 420m² hospitality suite
- Private onsite helicopter pad

BARCELONA



- ISPS compliant
- 24-hour security and surveillance
- Dedicated customer service and dockmaster team
- Protected and safe harbour with calm and clean waters
- Mild climate throughout the year
- Technical trade support
- Backed up by an award-winning British refit shipyard
- Up to 25 refit spaces on hard standing for yachts between 20-60m LOA
- 620t and 200t travel hoists onsite

- Wifi connection
- Waste and wastewater collection
- Private parking in front of berths
- Stores distribution
- Toilets and changing rooms
- Laundry services
- Free gym, yoga classes and sport sessions for crews
- Onsite bar/restaurant
- Waste management areas for special residues
- Bunkering
- Helicopter landing site
- Mail delivery on board

Global Yacht Support

Pendennis can offer global support to any superyacht. For all enquiries, please contact +44 (0)1326 211344 or info@pendennis.com.



