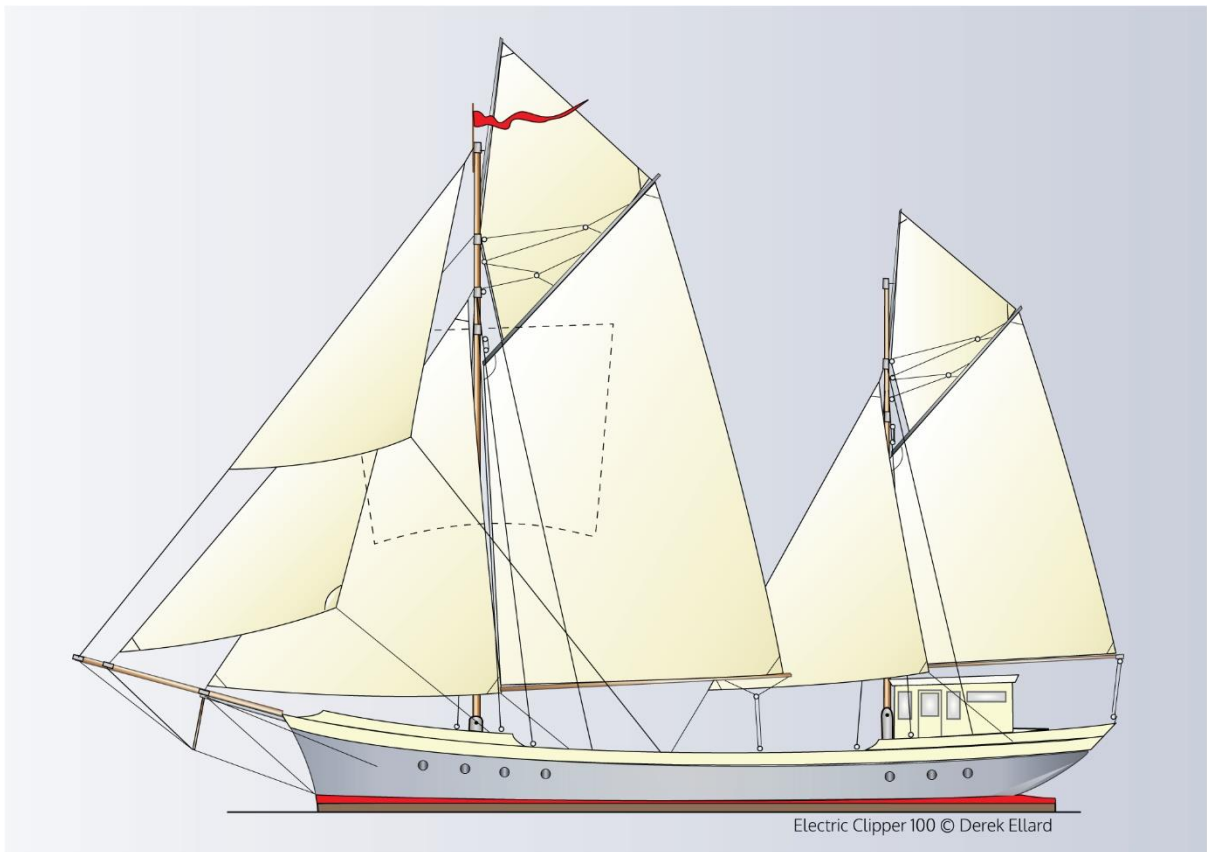




Go *SAIL* Cargo

SHIPPING SOLUTIONS



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PART 1

GO SAIL CARGO ZERO EMISSION SHIPPING

Before I began work on our new sailing cargo ships, I went back to basics and identified several key attributes I considered necessary for a successful wind powered ship.

- Any proposed vessels must aim for zero carbon operation and ultimately zero carbon build.
- They should dovetail seamlessly into existing freight handling systems – we ship containers.
- Any new ship must operate safely, competitively, and profitably with the least possible disruption of the natural environment.
- They should have a long and versatile working life to ensure good returns on investment but enable future technological advances to be incorporated efficiently with minimal disruption to schedules. The latest weather routing systems are a good example.

Our premise is simple. Use traditionally-rigged small sailing ships, honed to near-perfection over the centuries, as a template for 21st century freighters. Examine, analyse, upgrade, and improve every element of the vessels using the best technology available. Then, inspired by the astonishing US WW2 Liberty Ship program, *set up global mass-production* facilities to build them and exploit the economies of scale.

In order to get such ships on the slipway, extensive research, consultation and creative thought over a period of seven years is ongoing – only the best will do. Efficiency, reliability, safety, and sustainable profitability is the aim. With the adoption of rapidly evolving technology, our time has come.

Go Sail Cargo's new zero carbon ships will incorporate a host of advances, among them low friction bearings, new generation solar and batteries, hull friction reduction coating, Scandium alloys, combined PV/hot water panels on the wheelhouse, dorade powered air cooling, compact VAW generators on the channels plus multiple solar inputs.

Sustainability is high on our list as is recycling and new ways to use materials including spray-on recycled cork insulation and using decorative timber offcuts to clad cabin doors. We will use filtered rainwater to top up the tanks and introduce compact vegetable and herb growing racks on the larger boats.

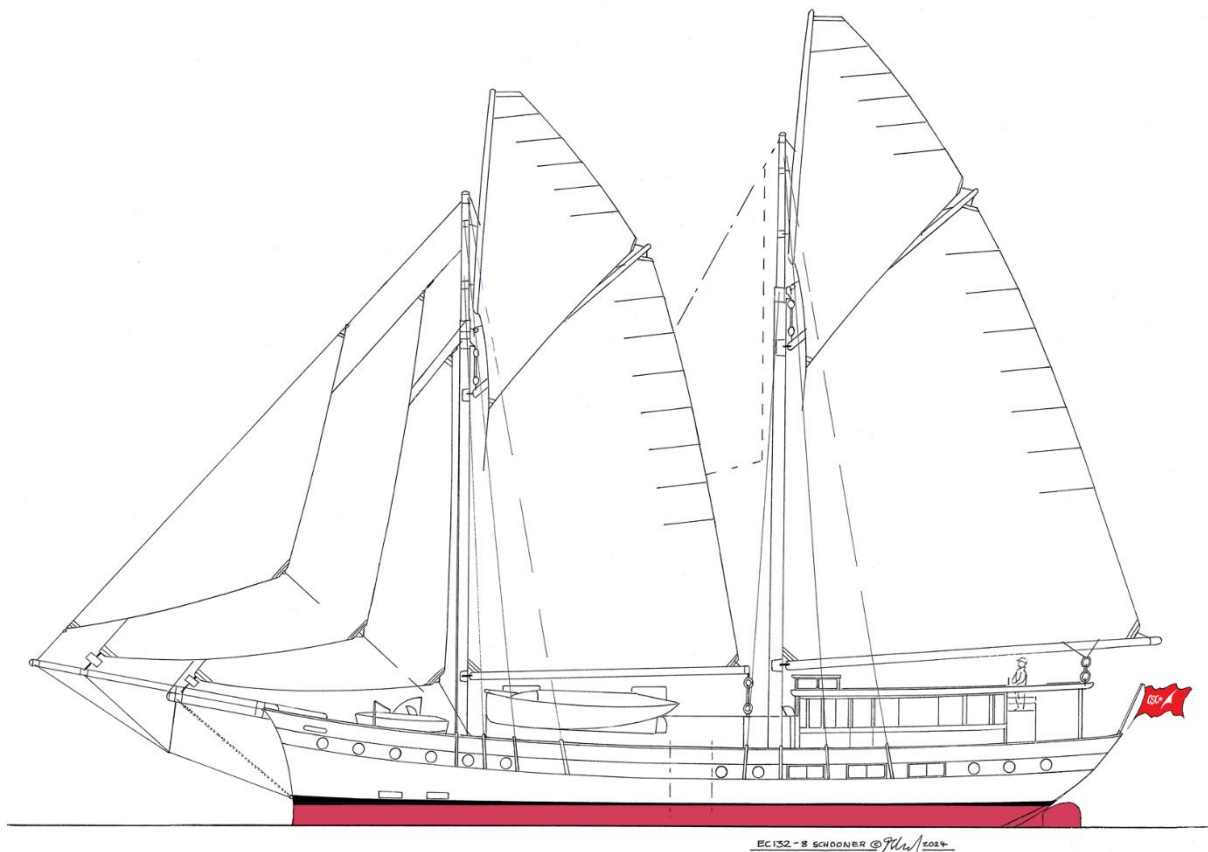
Weight aloft will be dramatically reduced, the sails will draw on racing experience and the *instant torque of the electric engines will be there on demand*, yet at first glance they wouldn't look out of place in a 19th century harbour.

Why? Chief among our reasons is the fact that paying passengers are an essential element of the operational spreadsheets. Publicity and profitability are important and yes, the boats are working freighters, but to attract paying passengers some aesthetic elements of the romantic past should be retained without sacrificing speed and efficiency. Besides, a decent bowsprit is an essential selfie ingredient. A memorable trip on board a rakish ship is a media opportunity.

Our portfolio of new vessels, some in KD kit format for smaller yards, is tailored to all small ship sectors from the one-man island hopper to ocean-going 12-passenger schooners with up to 36

containers in the holds. The schooner is a powerful three-masted ship with room for 12 guests in beautifully appointed cabin suites.

There's a new ship's boat – flexible, fast and fit for purpose. There's dagger boards in low-friction sleeves to dampen the roll and sharpen upwind performance. Stabilisers, anti-friction hull coating and a dovetail sectioned keel are also planned. On board power consumption is minimised and extensive solar is backed up by prop regeneration and wind generators. With a crew of up to 12 she is a smart, versatile ship for feeder, short sea or ocean routes. Development and evolution of all models including her smaller sister – the EC 132-8, continues, taking full advantage of technological advances. The foundations are sound and interest is growing in this rapidly advancing sector.



Go Sail Cargo Electric Clipper 132-8

PART 2

SAIL TRADING – THE FOUNDER’S OVERVIEW

I first began to think seriously about sailing cargo ships in the 1960s as the last of the wonderfully efficient Thames Sailing Barges plied their lonely trade along the English coast and rivers. By the beginning of the Seventies, the final cargo under sail was carried by the recently restored Cambria. That a cargo of 100-150 tonnes could be safely transported by a 19th century engine less sailing ship manned by a crew of two or three was, and is, a triumph of practicality.

Fast forward sixty years and with the real threat of human extinction, sail is a hot topic and the focus of a thousand marine architects with hundreds of specialised programs. The world needs them and their remarkable innovations but equally, *society must reference the heritage of working sail* and heed the priceless experience derived from the past. My own path recognises the lessons of history, incorporates the wonders of technology and combining the two, offers zero-emission sailing cargo vessels that are not only risk-averse but can be mass-produced and slipway-ready in the shortest possible time. Given the accepted need for immediate action and the essential need to integrate the ships into existing freight handling logistics, the building of such vessels is a logical step. Sailing advances are such that our rigs are half the weight of an equivalent Thames Barge and electric auxiliaries, build systems, batteries and solar power systems will never stop improving.

A lifelong respect for the often unpredictable power of the sea has led me to design ships that are strong, safe, stable, reduce weight aloft and ensure that all sails can be manually controlled in the event of any emergency. This is simply good old-fashioned seamanship.

While huge cost-efficient container ships cannot possibly be rigged like a clipper or schooner, their smaller cousins can and should be, provided they take advantage of 21st century innovations. It will take a massive effort and playing around at the edges with “green diesel” is simply not good enough.

It is my firm belief that a well-found sailing ship with a fully optimised hull and rig plus electric auxiliary is neither risky nor ambitious – *we have the skills and technology for true zero carbon trading right now*. Free fuel is a reality and its time has come. New generation perovskite solar panels are twice as powerful as those of a decade ago.

The electric motor has one moving part, directly connected to the variable pitch propeller. What could be simpler? The battery storage should be sufficient to power the vessel as needed and will reflect the requirements of the proposed use. As an example, an EC 100-8 spice trader on the Marseille/Madagascar route will need not only a good wardrobe of light weather canvas for the Tropics but battery banks sufficient to transit the Suez Canal at 6-7 knots for 14 hours plus a bit for eventualities. Back-up generators are essential too. However, given good solar input, propeller regeneration and a set of compact vertical axis wind generators there should be no cause for range anxiety. Our calculations indicate that in the unlikely event of flat batteries, no wind and no generators, the solar array on our EC-100 will power the ship at 4 knots. With the generators on the speed rises to 6 knots. Further, the relentless progress of technology means that the likelihood of having to start the generators at all will recede with time.

While some may question the use of traditional rigs, ours are traditional in appearance and essence but certainly not in performance. *Tests indicate that a well-designed gaff rig is just as effective as a Bermudan*, and small upwind sacrifices are more than compensated for in superior off wind performance. Then there’s the big advantage of using the gaff as a dockside crane. Sailing and sail technology has made huge advances in the last century and we will use every opportunity to take

advantage of the performance gains without losing the passenger-attracting aesthetics of billowing sails in a brisk breeze. Paying passengers help man the ship and balance the books too. The economics of reduced crew levels are addressed with powered handling systems and stronger, lighter gear but manual back-up is available because common sense and due respect for the ocean remains a priority. The storm will not ease while you try to fix an electronic glitch in the automated reefing system.

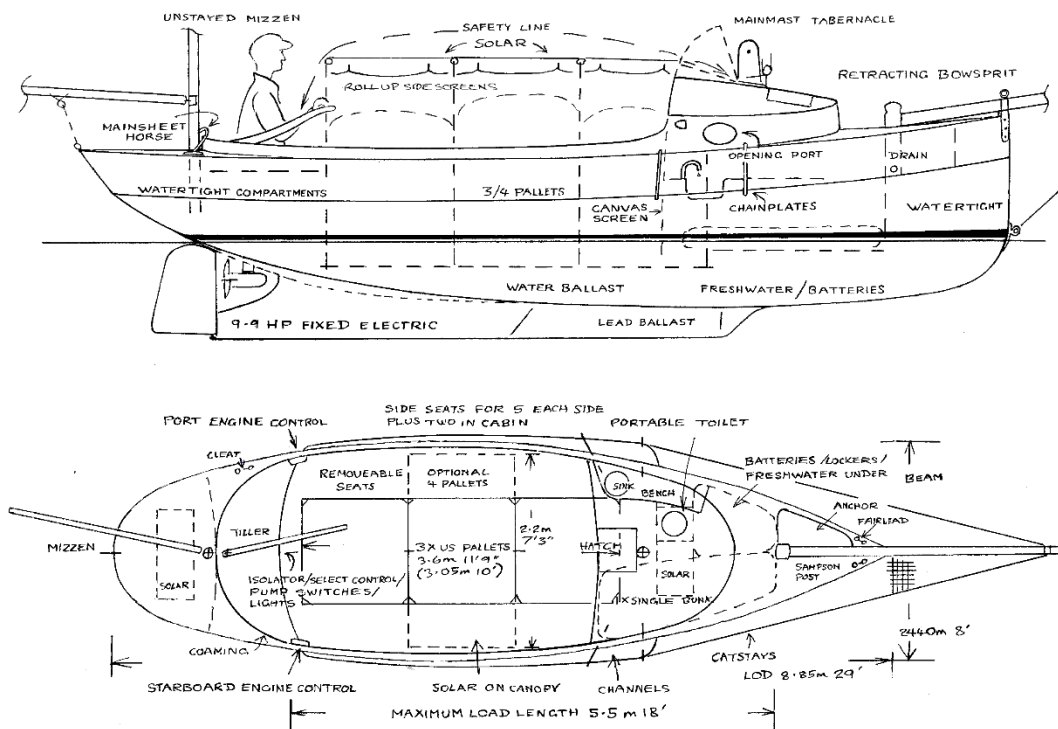
Once in port, cargo is king and getting it on and off efficiently is essential. The hatch covers with their solar panels are folded back. The aft dockside mast stays are quickly and easily unshackled and the furlled sails swung aside to ensure the containers or bulk break cargo is accessible. *For smaller ports the ships' own derricks can load up to 5 tonnes, the passenger module or the 10-pallet electric pontoon for use in remote locations.*

Of course that is only part of the story, behind the scenes is a hive of shipbuilding activity with the multiple disciplines of engineering, stability, optimising, registry, compliance, and insurance to consider. A long list but we're on to it!

Finally, while we wait for solutions to the problems associated with the world's giant container ships, let's get going with smaller, simpler risk-averse sailing cargo boats right now, or nature will make the decision for us.

We are actively seeking partnerships, individual visionaries and enlightened investors, we offer shares in a new global shipping project *with absolutely no limits.*

STORNAWAY 29 GENERAL ARRANGEMENTS CARGO VERSION



Stornaway 29 General Arrangements © Derek Ellard

PART 3

POWER ON BOARD - ELECTRICITY

The generation of electricity in sufficient quantities to power all the motors, pumps, lights, derricks, winches, and assorted systems will be, wherever possible, pollution free, reliable and from a variety of sources. While our ships will have manual options for the sail handling systems, safety and modest crew numbers necessitates efficient, reliable, and easy to service power equipment.

As a result of ongoing research and development, we have increased the size of the battery banks and motors on our ships. Larger banks are now a viable proposition as battery prices continue to fall and energy density rises. For ships operating in equatorial waters, good reserves of stored energy are vital as light winds are prevalent. The electricity generated on our Clipper range is from the following sources, and as an example, we use the Clipper 100-8.

- **Propeller regeneration.** Under sail the vessel's auxiliary electric motors become generators in much the same way that electric vehicles harvest energy under braking. The props spin as the water flows across the blades and when the batteries are charged up, the blades can be folded to reduce drag. There is a small speed reduction as a consequence but it will be marginal, particularly in higher winds. This is a welcome bi-product and removes the need for separate hydro-generators. Useable voltage will depend on boat speed, propeller design and motor size.
- **Solar panels** will be fitted to the wheelhouse roof and generate 8 Kilowatts. A percentage of these will be combination thermal/electric units. The water in the thermal panel cools the solar panel above – increasing efficiency and generating hot water. Solar panels will also be fitted to the cargo hatch covers, awning, boat covers and mainsail. All together 16kW is generated.
- **Vertical Axis Wind Generators.** (VAGs) All our vessels are fitted with steel “channels”, horizontal panels at deck level either side of the ship. They perform a number of functions, including a stable base to mount VAGs. Power output is increasing steadily, year by year.
- **Plug in power.** Rapid charging stations for boats and ships will become commonplace. If they are solar or wind powered, then it's a win for everyone and common sense prevails.
- **Container** sized renewable energy power units can be shipped and also used for disaster relief in remote locations.
- **Human muscle** can be another power source. As an example, rowing machine generators will allow passengers to help charge the batteries and keep fit at the same time.
- **Back up diesel generators.** The fuel efficiency of the next generation will undoubtedly improve and the use of greener fuels will eventually become commonplace. The aim is to complete the voyage without the diesel generators.
- **Further efficiency gains** include: The use of water used for cooling electronics, batteries, auxiliary motors, and generators to pre-heat the ship's hot water supply. Sail/laundry drying racks can use ducted heating via fridge/freezer compressors. New generation fans, pumps and bearings are quieter, longer lasting, and all help to reduce the reliance on fossil fuel generators. Incremental steps that quickly add up to significant advances in efficiency, reliability, and profitability.

SAILS – THE ENGINES ABOVE DECK

Just as the auxiliary diesel was once referred to as the iron topsail, the sails became the engines aloft. Just like any engine, they need to be designed and engineered with care to ensure optimum performance for the demands made of them are extreme. From balmy cruising in the tropics to clawing off a treacherous lee shore under storm canvas, these engines cannot miss a beat.

At Go Sail Cargo our route to reliable horsepower is the gaff schooner or ketch. These sail plans have evolved over the centuries in the hands of fishermen, fighters and traders, all with a big stake in their performance and versatility. While the clippers running down the ocean's freeways, the trade winds, set clouds of square sails, they are not suited to our smaller boats as their job is to deliver the goods to the smaller ports and remote communities with a skipper and fewer hands to trim the sheets.

In keeping with our commitment to practical low risk evolution, it is true that the profile of our traders would not look out of place moored alongside a 19th century quayside, however closer inspection will reveal dramatic improvements. *Weight – it decimates performance, so we trim it away.* Heel is reduced and more sail can be set – a bigger engine. As an example, the mainmast, sails and rigging of a 19th century Thames Sailing Barge weighs 4 to 5 tonnes, for an equivalent new Clipper 100 we're aiming to trim that by 50%. That translates into a faster ship, a safer ship. But it doesn't end there, longevity and reliability are way better so it's good riddance to rotting hemp and disintegrating canvas. There's new alloys, carbon fibre, new generation synthetic ropes, low friction fairleads, and powerful winches.

Our sailmaker of 25 years, Ben Kelly, is not only an expert in modern interpretations of traditional rigs, but now he's with North Sails he has access to the very best of modern technology.

Using our new electric clipper 100-8 as an example, he's suggested 3 types of sails starting with the mainsail, the key driver, and the mizzen. These sails utilise advances pioneered in racing but adapted to working craft. They're laminated not sewn and built up over adjustable moulds to the desired profile. *The 21st century sailmaker is rolling resin and slow cooking* to create sails our forebears could only dream about – superlight, tough, perfectly foiled and with flexible solar panels glued on, complete with bonus power. In the event of damage new patches are applied with fast curing resins.

The second type in the wardrobe comprises the staysail, or inner jib and the jib itself, contemporary evolutions of working canvas, made from heavy duty synthetic cloth to withstand the rigours of trading under sail. The staysail is roller furled and shackled to the end of the inner steel bowsprit to simplify the sail plan and allow more room for the square sail. The jib itself is similar and both foresails are strong, resilient, hold their shape well and shed water quickly. These two sails complete the 'working wardrobe.'

Third in our list are all the lighter, fair-weather sails, genoas and topsails. Again, drawing on a vast reservoir of competition experience, these are full cut to power the ship in lighter conditions. Given that our traders may well operate in the gentler latitudes, *it would be a crime not to include an outrageous Yankee* from bowsprit end to masthead. Generous yard topsails will be bent on to lightweight alloy or, budget permitting, carbon fibre spars and sent aloft as soon as possible and taken in only reluctantly.

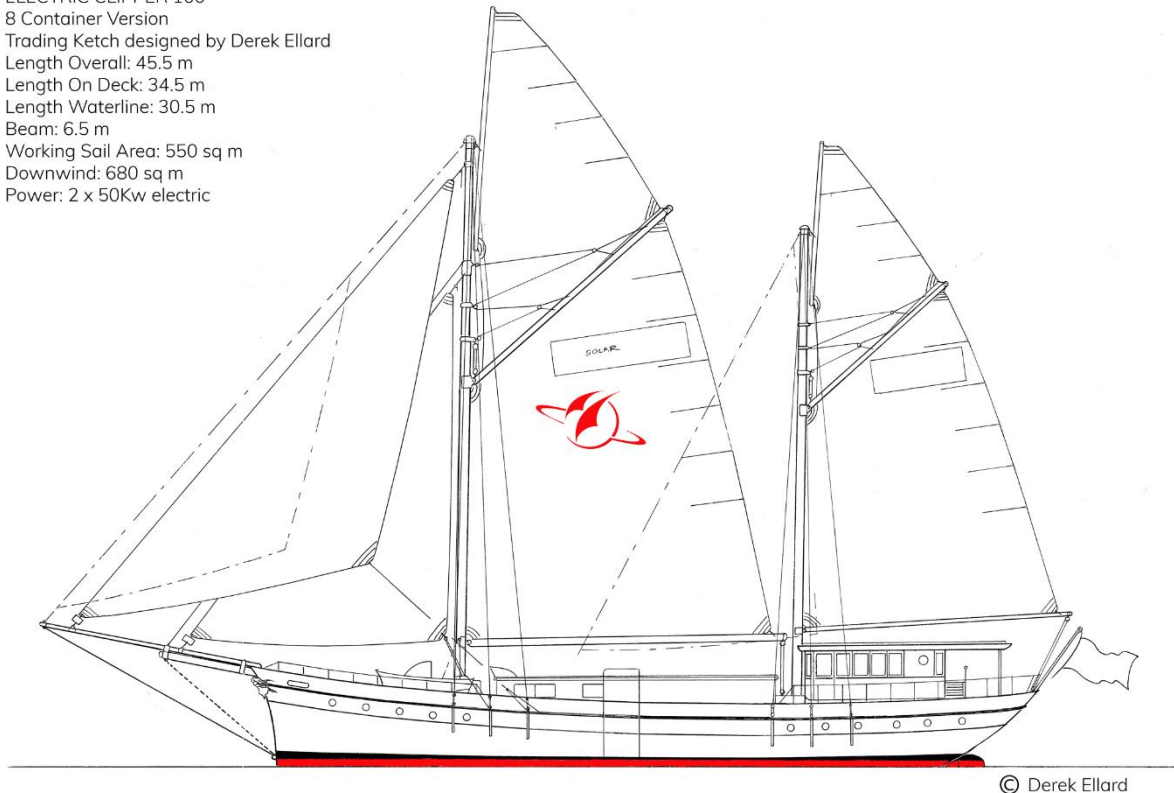
Now we come to a couple of sails that depart from our 19th century template, the first, the mizzen staysail, is hanked on to the mizzen derrick and set out to windward in clear air. Then there's the "hammock" a square topped spinnaker with an offset yard set like a clipper's stunsail. Last but not

least there's the square sail, a downhill flyer to exploit the "lift" factor and provide inspiration for the owner's boardroom painting. This sail is bent on to its yard and pre-furled prior to hoisting. A wire "track" shares the load and holds it steady when hoisting. Once up, the square sail is unfurled and braced from the safety of the deck. This sail is a special case as it has to be light enough for two hands to set but strong enough for prolonged trade wind use. *This sail could eat up the stress-free trade wind miles.*

Now you're probably wondering why all those sails? Versatility, balance and manual operation when all else fails – a sail plan for every occasion, force 2 up to force 7. Beyond that it's time for that tiny orange storm jib, faith in a good ship and a steady hand on the wheel.

These canvas engines then, produce more useable power to drive the Clipper 100 along at a fair clip, come what may, the cargo is safely delivered, there are no fuel bills and the ship's owners are content. A job well done.

ELECTRIC CLIPPER 100
8 Container Version
Trading Ketch designed by Derek Ellard
Length Overall: 45.5 m
Length On Deck: 34.5 m
Length Waterline: 30.5 m
Beam: 6.5 m
Working Sail Area: 550 sq m
Downwind: 680 sq m
Power: 2 x 50Kw electric



Go Sail Cargo EC100-8

PART 4

SAFETY AT SEA – The risks and how to avoid them

As a 10 year old learning to sail, my navy veteran father instilled in us the need for safety and proudly wore his own “Mae West” WW2 lifejacket when sailing. He also expressed his sorrow on learning about the sinking of the wonderful Pamir, one of the last of the Cape Horners. She was carrying a cargo of Barley under sail alone when in 1957 she foundered with a loss of 80 lives.

Despite numerous advances made since she was launched in 1905, her modern descendants can still be caught unawares, sometimes with tragic results.

S. E. Perez references the loss of the famous P-Liner in his informative paper – https://www.jmwe.org/uploads/1/0/6/4/106473271/downbursts_groundings_incompetence_and_other_dangers_to_21st_century_sailing_vessels_4_dec_2021.pdf

This well-researched document is a sobering analysis of the often-ignored risks that merchant sailing ships face, especially when confronted with sudden and unpredictable squalls, events that can only increase with accelerating climate volatility. If we are to continue to reduce emissions – and we have little choice – we all need to lift our game and design safer wind powered ships.

The sailing ship by nature is vulnerable to extreme downbursts and often violent wind gusts. Perez lists the following issues:

1. Lack of doppler and sonar systems as early warning alarms
2. Tall spars and high stability combined with inefficient emergency sail reduction systems
3. Underpowered auxiliary engines
4. Deep draft vessels should avoid areas used by whales and underwater appendages should be retractable
5. Lack of specific sailing ship awareness and targeted emergency training.
6. The need for display sensors indicating deck hatch status plus watertight compartments.

These are the main concerns and while we at Go Sail Cargo have already addressed most of these recommendations, we can and will go the extra mile. Here we present a brief summary of our proposals.

1. The first issue is the easiest to adopt with readily available off the shelf doppler radar for early detection of downbursts, and fisherman sonar for advance warnings of whales and similar large marine creatures. These and other sensible and potentially life-saving electronic systems should be mandatory.

2. In any maritime emergency, time is of the essence and having the detection equipment on board is an essential prerequisite and buys valuable time to react. But we must equally ensure that the transverse stability of our vessels is the best we can realistically achieve in order to build in resistance to disaster. This we have addressed via a whole raft of sensible, risk-averse proposals including:

- High density fixed ballast in a shallow keel plus water ballast with powerful pumps.
- Full width, almost square centre hull sections.
- Single story aluminium deckhouses with watertight doorways.
- Serious weight reduction aloft with simplified rigging, modern materials and gaffs doubling as derricks, no need for heavy deck-mounted cranes.

- The adoption of new-generation, low-aspect, risk-averse gaff rigs with carbon fibre topsail and square sail yards set from the deck. Given sufficient warning, the topsails can be taken down leaving the working canvas which can be rapidly depowered via roller furling staysail and jib, and the gaff sails are quickly brailed up to the mast, thus satisfying the second recommendation – get the sails in – *fast*. Such measures are not possible with many new rigs and the paper’s author notes this.

3. The issue of engine power is made easy by electric motors with solar recharged Battery banks. It is my considered opinion that our twin engine set up cannot be bettered for smaller ships. Their instant maximum power and excellent reliability, with no need to run within a specified rev range is surely enough yet there is so much more to tip the scales in their favour including:

- Reduced noise, vibration, and free inexhaustible fuel supplies with no need for expensive bunkering.
- Separate new generation energy dense battery banks for each motor.
- With no diesel, fire risk is minimised and there is absolutely no chance of oil spills.
- The relentless advances in battery and solar technology, progressively cheaper and easily adopted, serve only to strengthen our case.
- Twin screw systems allow for a better flow across the naca-foiled rudder blade and the result is enhanced manoeuvrability, especially if trim tabs are fitted.

4. Collisions with Whales and to a lesser extent other miscellaneous underwater objects are a more serious issue with smaller vessels. Given our adherence to relatively shallow draft hulls with sensor equipped retractable dagger boards, externally mounted for reasons of maintenance and prevention of hull damage, we are confident that these measures are close to ideal. The boards themselves are fitted inside horizontal channels at deck level with the further advantages of a wider, safer stay base and extra hull protection in the event of accidental altercations with wharves or other vessels. With no apertures in the hulls, damage control is made easier.

5. Licensing standards for crews of new generation sailing ships will need to embrace not only all the recommendations advised in the paper including a thorough understanding of the vessel’s stability, but also ensure a good working knowledge of modern electronics, electric motors and just how they relate to today’s sailing ships. There is no substitute for proper training.

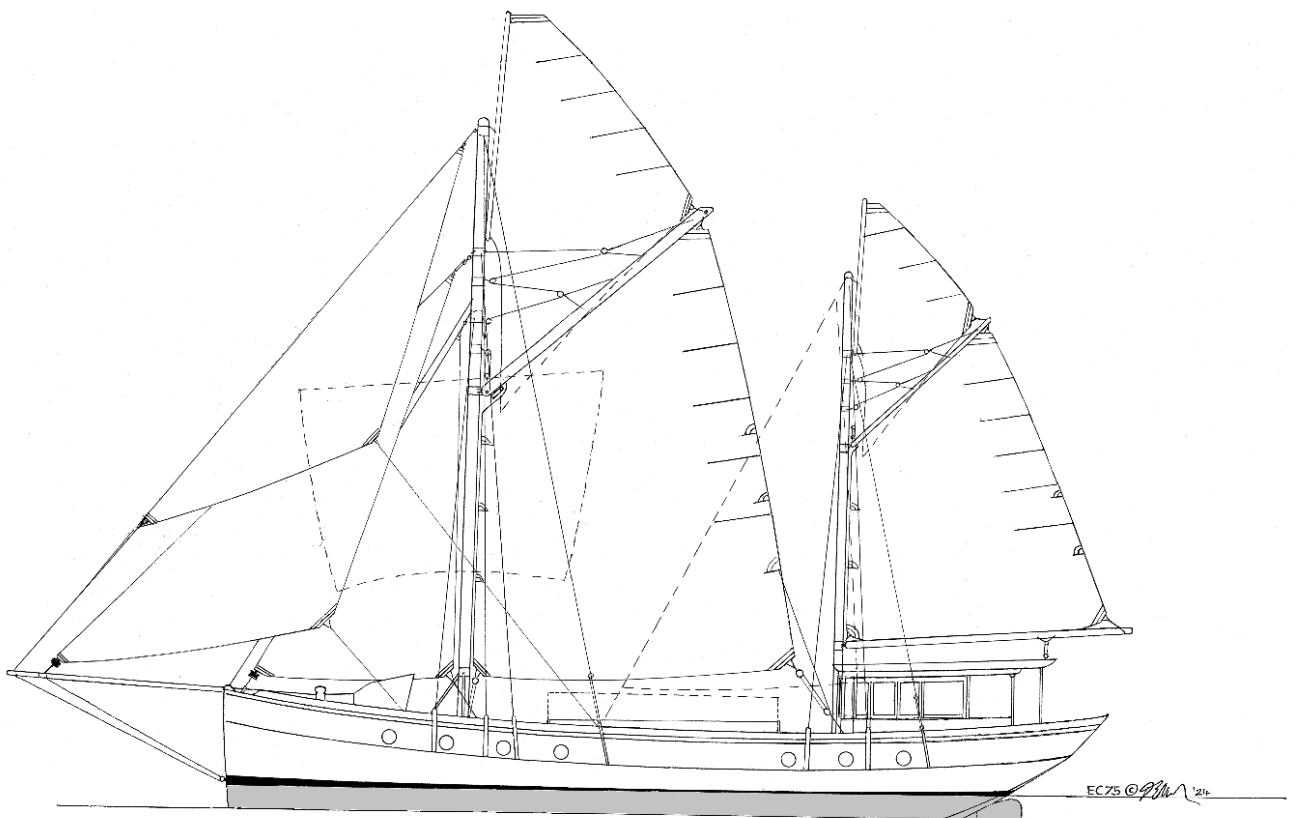
6. The final recommendation, and surely one of the most important is that the modern sailing cargo vessel should be equipped with watertight compartments and sensors to monitor all hatches leading to these compartments. With relevant information relayed to the bridge, hatches can be sealed, remedial action can quickly be taken and recovery can get underway.

But who will pay for the safety surcharges? We have given the matter a great deal of thought and here are some Go Sail Cargo suggestions.

Free fuel, harnessed by sails, solar and propellor regeneration will dramatically reduce operational costs. A demonstrably safer vessel with inbuilt lower maintenance should surely attract favourable insurance rates. These two advantages alone will free up capital. Further, our proposed range of versatile, standardised and regionally mass-produced vessels will result in lower build, fit out and delivery costs. Then there are various subsidies, income generating advertising on our sails and the realistic business opportunities offered only by true zero-emission vessels - including *honest* carbon offset alternatives and *genuine* eco-tourism.

Our commitment to excellence does not end there, another US study summarised in the journal, Marine Log, which identifies crew stress and fatigue as major factors in accidents on board. In addressing this we submit that a non-polluting vessel that is safer, more stable, and free from excessive noise and vibration will go some way to alleviate the causes. Add to that we propose better diets with some fresh produce grown in portable mini-garden racks, comfortable, self-contained quarters and our staff/crew shareholding scheme which will brighten their payday prospects.

The 21st century has bestowed some remarkable technological advances but with them some ominous weather reactions from our beleaguered planet. The recent tragic loss of the fine ship De Gallant should be a wake-up call, so let her loss not be in vain, but rather let it inspire us to build the safest ships we can.



Go Sail Cargo EC-75

PART 5

SHIPPING SOLUTIONS *with a focus on the PACIFIC*

Go Sail Cargo is committed to practical, zero emission shipping solutions available off the shelf right now. Based on one simple premise, that sailing ships work, but work much better with new technologies. *The key to successfully integrating technology lies in the use of well proven systems with manual backup onboard.*

While it is important to continue research in all forms of zero carbon transport, Go Sail Cargo is committed to getting reliable trading ships to the Pacific Nations as soon as possible.

Climate change won't wait, so we will build a 21st century coastal trader in steel. We will work up an easily driven hull, rig with the best sailcloth, add efficient electric auxiliaries with solar charged batteries. A new ship that costs next to nothing to run.

Imagine a coastal trader that reduces fuel costs by 90%. We could have one working on the water within a year. Imagine a dozen of them, many built in the larger Pacific Island communities from kits. We can start the kit production process in six months following an order. We have been manufacturing ply and timber kits for over thirty years, steel is the next step.

Pacific decarbonising starts here, now. Consider our Electric Clipper 100-8.

KEY ADVANTAGES

AVAILABILITY

The use of proven off-the-shelf commercial componentry and systems. The design and engineering is at an advanced stage. A leading shipyard is ready to go. This all adds up to immediate action.

AFFORDABILITY

A firm commitment from Go Sail Cargo to use a raft of cost cutting measures and keep all build costs down to a sensible level without compromising quality or longevity, add ultra-low operational costs and the result is a financially attractive solution.

CAPABILITY

Practical, low risk, cost effective, fit for purpose workboats, designed for a long hard life by sailors and shipwrights with a vast reservoir of experience.

VERSATILITY

Engineered and built to the highest standards, our ships will be capable of long, useful working lives. Their built-in ability to incorporate technological advances will keep them at sea for longer than current industry standards and they are easily customised to suit all operations in all conditions. The EC75 would make a fine fishing vessel. The EC132 is set up for fast conversion to specialist research or a containerised medical centre. The Secret 55 Trader can be converted to a ferry in hours. Tomorrow's travellers will demand zero-carbon operation, wi-fi, plentiful hot water, good cuisine and a comfortable cabin. Traders will expect their goods, delivered on time at a competitive price.

Tourism, trading, ferry services, research or disaster relief where there is no fuel to be had. Open ocean or coastal, rivers and lakes, we'll be there.

RELIABILITY

Reliability is a priority. There are no unproven technologies on board, there's optional manual operation of all equipment, simple components which can be repaired or serviced worldwide, multiple back-up charging systems and a tough, stable steel hull. Every component will be engineered and standardised to ensure confidence and easy maintenance -wherever you sail.

BUILDABILITY

Go Sail Cargo ships are, in essence, optimised steel coasters, set up for mass production. The availability of our kit systems, developed over thirty years and adapted to steel hulls, plus a comprehensive builders' manual, mean that smaller shipyards throughout the region can build their own ships. Big cost advantages and investment in the community, for the community.

ACCOUNTABILITY

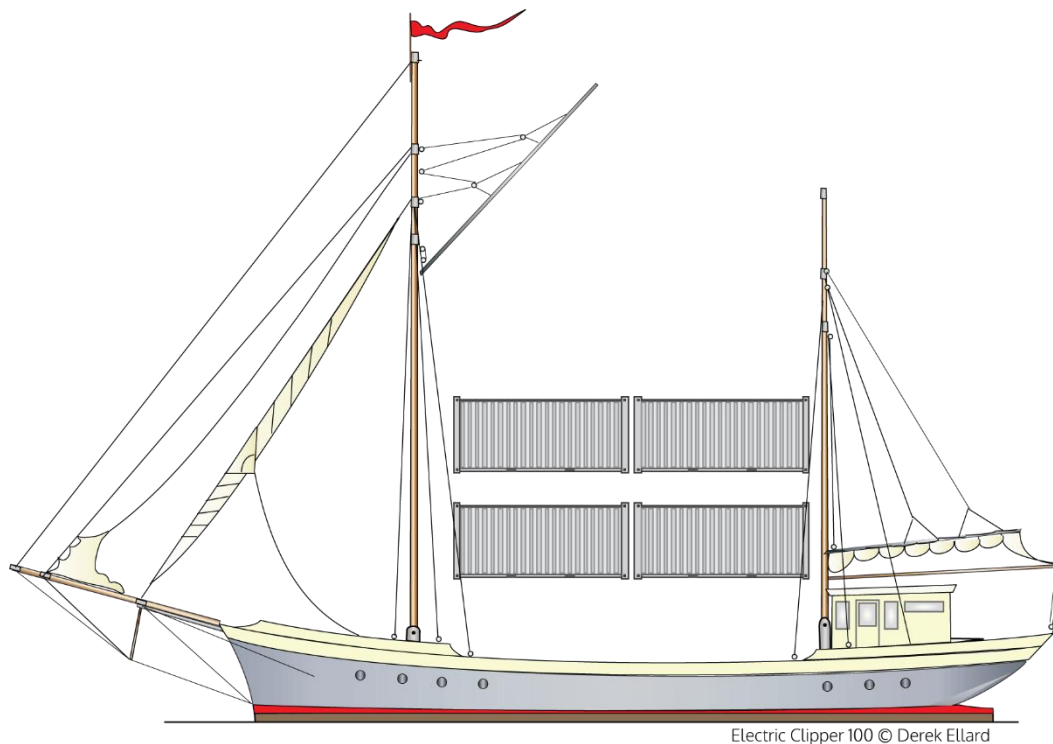
All governments and businesses should strive to be accountable for their choices and the flow-on effects along with the impact on those who inherit them – their children. Our maritime solutions, available now, are investments in their future. We will do our very best for those who come after us – this is our legacy.

FALLIBILITY

No ship will ever be perfect but the designer's job is to get close. Nearly seven years in development, the Go Sail Cargo Clippers combine the very best of the 19th and 21st centuries in strong, stable, speedy ships. Should the wind fail, the battery banks plus back-up generators ensure the ship motors on – there's cargo to deliver, schedules to keep.

PROFITABILITY

We have identified a wide range of income streams to ensure excellent returns. Further details are available, email info@gosailcargo.com



Electric Clipper 100 © Derek Ellard

THE KITS

This option was designed to enable smaller regional yards to assemble their own trading ships from kits delivered on flat rack containers.

The kit format comprises accurate pre-cut steel components, delivered ready to weld. All modular standard components from fit-out to engines, batteries, sails, solar systems etc. would then be delivered in stages as work progresses in the regional shipyard. The community saves money, local people are employed, and design variations are incorporated to suit community use – it becomes “their boat.”

READY TO SAIL – THE ELECTRIC CLIPPER SERIES

EC 180 a three masted 36-container schooner.

EC 132-8 a larger schooner rigged version of the 100-8

EC 100 available in two versions with a 4 or 8 container capacity

EC 75 this single container ketch also carries 18 pallets or mixed cargo. Can be manned by two.

The Secret Trader 40 is the smallest boat realistically able to take a container.

The Secret trader 50, now evolving to a 55, is for coastal or inter-island trade with a crew of two plus two passengers for longer voyages, more on short trips. This boat, like the 75 can double as a ferry.

THE SHIPS BOATS

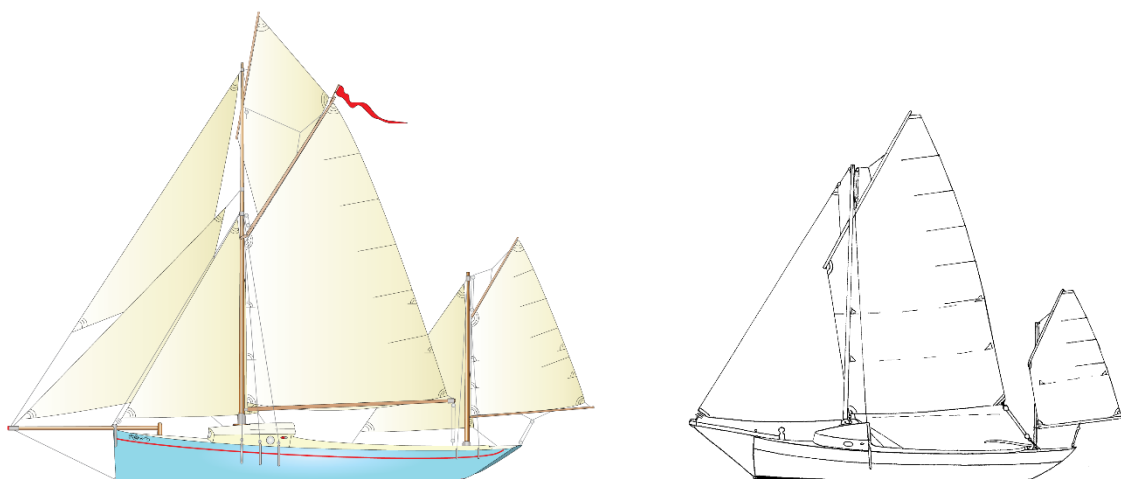
Four new boats will be available, all sail/electric and suitable for multiple uses – private, tourism, sail training and on board the ships.

The **Skerrick** is the smallest, a 4-person lugger with a big cockpit used as a tender for the Secret Traders. The boat can also carry a pallet of supplies.

The **Shimmy 14** is a 7-person lugger with a retractable electric pod drive and a one tonne cargo capacity. Used as a general-purpose boat on the Clippers.

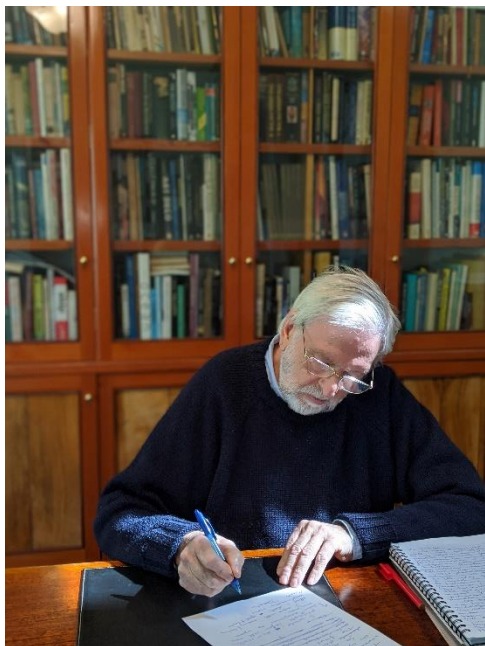
The **Stornaway 29** is a versatile boat for passenger transfer or adventure, tourism, one man 4-pallet cargo use and general duties, even offshore.

The **aluminium pontoon** is a tough workboat for lightering, diving, and passenger transfer. Powered by two wireless controlled electric outboards and charged via its own solar cover.



THE DESIGNER

Derek Ellard is the designer and initiator of the concept.



Derek has spent most of his working life involved in boats and the sea. He has studied working sail since he was at art school, specialising in his native United Kingdom smacks, barges and traders. In 1991 he started Scruffie Marine with a simple theme – take the best of traditional rigs and efficient hull forms and combine them with modern technology. The same tried and tested principles apply to his Clipper series of today.

Scruffie Marine went on to sell 340 boat kits and boats worldwide and earned many accolades, providing valuable and well-designed boats or projects for schools, outdoor education and private use. the business is now owned by US enthusiasts but Derek retains an interest.

He is one of the few people in the marine industry who actually builds the boats he designs. He builds bookcases too!

Derek's Secret 33 ferries <https://electricferry.com.au/> look like boats from the 1920s yet incorporate a wealth of 21st century features and remain a perfect example of his vision.

A passionate environmentalist with a keen understanding of the practical aspects of the shipping business with a keen eye for aesthetics, Derek is an innovative designer committed to a better, cleaner, future.

A CALL TO ARMS

Slowly but surely the maritime world is waking up. Just as electric cars, buses and trucks were a rarity a decade or two ago and sail-electric shipping was almost unknown, now it is rapidly gaining traction and will be commonplace within ten years.

But is it enough? Well, no, much, much more needs to be done, preferably yesterday. While our offerings are at the smaller end of the shipping scale and we certainly do not have all the answers, we do have a range of vessels ready to compete on equal terms with fossil fuelled shipping. Except that we're not equal, we're better – our fuel is from Mother Nature, it's unlimited and it's free.

We are deliberately not breaking new ground, we are not cutting edge and certainly not revolutionary – those things tend to be risky and expensive, particularly if they don't live up to the hype of the day. But we will make full use of *proven* technology to build the ships of the future.

The call is straightforward. We're practical people, not dreamers, and the world and its people urgently need reliable solutions. We hear them calling and in partnership with visionary investors and an enlightened younger generation, we are ready to answer the call.

CONTACT

Derek Ellard info@gosailcargo.com for further details including global manufacture, income streams, operational aspects and much more.

APPENDIX 1

PROOF OF CONCEPT?

The tall ship Tecla is very close in size and rig to the Clipper 100 and she's still sailing the world after 108 years.



TECLA