

# THE SNAPSHOT

The Monthly Newsletter of Project Torpedalo

“Only by setting distant and difficult goals do we truly succeed.”

PROJECT TORPEDALO

Number 13 - March 2011

[www.torpedalo.com](http://www.torpedalo.com)



## TORPEDALO ONLINE DONATION SYSTEM NOW LIVE!

We're delighted to announce that we can now accept online donations to our charity causes through our website. By using a 100% secure credit and debit card handling facility from Barclaycard, we can take donations online while the fees for the service are less than half of those charged by charity collection websites like JustGiving. Those fees will be paid by the project, so that every single penny of donated money goes to our two charities - the Motor Neurone Disease Association and Make-A-Wish Foundation® UK.

The race is now on for us to raise our target of £250,000. Please help us to hit this target by telling people about what we're doing and why we're doing it. You'll find the donate button on every page of our website, starting with the homepage at [www.torpedalo.com](http://www.torpedalo.com). Clicking the Donate graphic above will also take you straight to the donations page.



Our thanks go to Zohar and the team at Global Beach for integrating the donation system in to the website so smoothly. Over the next few weeks they'll be adding more functionality with a table showing recent donations and messages from those fantastic people who pledge their support.

Along with the donation system going live, we've also updated some of the other key pages on the website with new information that tells the story of the boat design and details the manufacturing process and companies that we'll be using to build the boat. More is to follow as the detail design is completed and signed-off, but we hope you'll enjoy reading what we can reveal so far.

Major updates to the Sponsor section have also taken place, showing the commitment of the amazing companies that are making Project Torpedalo possible. Kit sponsorship is now just about finished, so we're now looking for the sponsors we need to transport the boat around the world and help us return home before we start the search for major financial corporate sponsorship to help raise our £250,000.



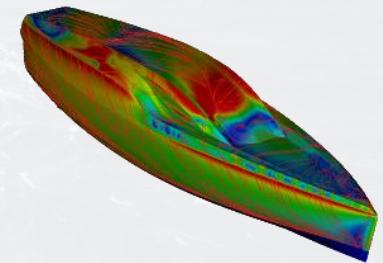
## FIRST DATA RELEASED FOR MANUFACTURING

On Friday 18th February, we had our first post-design milestone, with Mark releasing the first batch of manufacturing data to Curvature Group. The data was for the bottom half of the boat, and will shortly be followed by the top section once Mark has finished designing in hardpoints for the various components and systems that attach to the roof of the boat. Curvature will now order materials, build the steel armature and begin "blocking-up" the mould tool with bricks of foam ready to be machined. In the meantime, Curvature have been working hard on another part of the project - the production of a stunning 1:12 model, which is now complete!



## AERODYNAMIC ANALYSIS COMPLETE

Thanks to quick and precise work from aerodynamic analysis company Exa, we now have a complete aero profile of the boat. We have only slightly less wind assistance than the rowing boats in a tailwind, but a lot less drag in a headwind, and we also know how the boat will behave in crosswinds. The swept shape of the boat is inherently aerodynamic, and we'll prove the theoretical simulations in the sea trials over the summer. Thanks to Boris and all at Exa for their help!



# Live Events Update

## Changes to Promotional Schedule

Over the last two weeks, we've had to make some changes to our plans for public exhibition of the project. We've lost two events, both due to matters outside of our control, but fortunately we're in the process of adding several new events to make up for the loss and ensure that sponsors still see the promotional return that we promised.

Firstly, we heard about the unfortunate cancellation of the Liverpool Boat Show, which we were due to exhibit at. The organising committee of the show took the decision to cancel the event after a number of key industry companies withdrew from the show after a commercially unsuccessful London Boat Show. While this is a shame for us as it would've been a local event, the show was not part of our original plans and so the loss is manageable.. We were also told that, for a number of reasons, Bentley Motors could no longer accommodate the project on their Geneva Motor Show stand. While not hugely relevant to a marine project, the Geneva show is a great event and one that we are upset not to be part of. Sponsors Curvature Group and Flourish had spent considerable time and effort preparing features for the stand for us, and we disappointed that their work now will not be shown until our next event.



However, all is not lost! We've made up for the loss of these two events with two confirmed new promotional ventures and another two in negotiation. Mark and I (together with the new scale model) will be going to the USA in April for a week of press work, interviews and presentations about the project, which will hopefully raise awareness of what we're doing on the other side of the pond. We'll be revealing more details about this trip and what it will involve in next month's newsletter, but we've had interest from some of the most famous and respected news institutions and magazines in the world.

We'll also be at the Cholmondeley Pageant of Power, 15-17th July, hopefully with the boat on the water. This event has been running for three years and attracts over 50,000 people over the course of one weekend - we can't wait! Plans are also underway for our summer gala evening, to be held in London, and a possible attendance at the Cycle Show at the NEC in September. The summer gala evening has the potential to be an incredibly exciting event if all plans come to fruition - watch this space...



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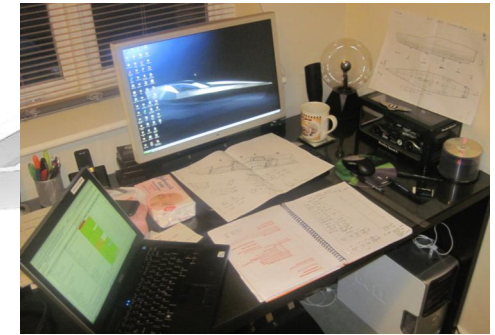
# Design Debrief

## Interior Stowage and Kit Placement

With the exterior surfaces of the boat now frozen, we've almost finished the process of working out where every piece of kit will be stored on the boat. This is more relevant at this point than you might think - we have to know exactly where the boat's Centre of Gravity will be located for the final stability and self-righting calculations, and to find that we have to position every single item.



The packaging work around this has been a combination of physical mock-ups, digital modelling and traditional sketching. We started by categorising the kit in to use every shift, use every day and that kit which we hopefully will use very little. This determined which area of the boat each piece would be stowed in, and precise locations have then be determined through the dimensions and weights of each item and how they fit in the available space. The result is a distribution that's balanced across the width of the boat (so that it doesn't list) and along its length (so that pitch is horizontal).



Meanwhile, we've been determining how the stowage solutions on the boat will work. We'll have carbon fibre stowage bins for all the food and that kit which will be kept in the centre section of the boat. For the bow section, where little-used kit will be kept, Henri Lloyd are designing and making a pair of fully customised stowage bags which will be compartmentalised and water-resistant. These bags will clip into the boat using small carabineers, and will hold everything from flares to baby wipes. For the living space, they're crafting two wall-mounted sets of waterproof pockets made from their fully recyclable BlueEco material, where we'll keep items like eating utensils and cameras.

Henri Lloyd are also producing padding for the cabin, which will cover the walls and roof and offer insulation from the outside heat and impact protection (being rolled in to a carbon fibre wall while asleep would hurt!). Again, this padding will be made of BlueEco, wrapped around tough bubble wrap. This makes the padding light, springy and waterproof - an ideal combination. All of the Henri Lloyd materials will be treated with their Silver Ion Anti Microbial technology, which repels bacteria and will help keep the boat (relatively) fresh!

## Sponsor Update

### Hancox, S3i, SP Gurit High-Modulus and Buck & Hickman

The last month has seen a final push to secure the important remaining equipment sponsors we need to manufacture and fit-out the boat. We're now at the stage where almost all of our kit is secure, with only satellite phone equipment remaining. Meanwhile, the only services left to secure are of a logistical nature - transportation for the boat, and for Mark and I to get back home from the finish line!



Moving an 8.3m long boat around the country is going to be a challenge in itself. Fortunately, Hancox Equestrian are providing a brilliant part of the solution. They're building a fully custom twin-axle trailer for the boat, complete with a winch and all required electrical and braking systems. The trailer itself is being designed by two engineers at Bentley Motors, and Hancox will take their design and construct the trailer from box-section steel. Standard parts for the trailer have already been ordered, and it'll ride on 20" wheels provided by Bentley! The trailer will allow us to move the boat relatively easily, and mean we can test the boat on a variety of inland, coastal and open sea locations.



The boat itself will feature a number of mandatory ropes, strops and lines fitted to the exterior. These all require fittings to attach, guide and secure them to the hull. We're delighted that S3i have joined the project as sponsor and supplier of all of the fittings we need. They'll be sending clips, hooks, rings and shackles in stainless steel, and a set of sixteen folding pad eyes made of titanium. These materials give us fantastic reliability, low weight and corrosion resistance, and the parts themselves are beautifully engineered. The pad eyes will be used to attach a grab line around the boat, while the other parts will be used for strops and retrieval lines that lead from the bow and stern.



With the Torpedalo Manufacturing Consortium formed and operating, we realised there was one area where we still needed to secure support. The exterior hull of the boat will be a carbon sandwich construction - two skins of carbon fibre separated by a foam core. This foam has to have specific properties, and can be extremely expensive. Norco GRP, our boat builder, contacted their friends at SP-Gurit High-Modulus, who are composite materials specialists. We had originally contacted them last year to talk about lay-up, so they were delighted to be able to help the project now with the supply of all of the core foam that we need to build the boat.



While the boat is mechanically relatively simple, we'll still need to take a comprehensive tool kit to ensure that if something does break or fail, we can fix or replace it. Buying a complete tool kit, including mandatory items and expensive equipment like multimeters, would've cost the project almost £1000. We've avoided this cost through a great sponsorship deal with tool suppliers Buck & Hickman, who have donated all of the tools we need for the boat at no cost. These tools will form the complete kit of equipment that we'll have onboard for any running repairs, and could very well mean the difference between success and failure.

## Help Needed

### The kit and services still to find

Despite great success with securing sponsorship deals for the project to help us design, build and equip our boat, there are still areas where we need help. Every month we'll show a brief list of the most important goods or services we've yet to agree. If any readers know of anyone who might be interested in being part of the project, please let us know at [mike@torpedalo.com](mailto:mike@torpedalo.com)!

- Satellite phone equipment
- Boat shipping

## Contact Us

### We'd love to hear from you

If you'd like to know more about the project, think you might be able to help or generally just want to say hello, please do get in touch!

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## PROJECT TORPEDALO

THE PEDAL-POWERED TRANS-ATLANTIC CHARITY CHALLENGE

Fundraising in aid of:



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Our thanks go to everyone who has supported the project so far. We couldn't be doing it without you!



Concept Group International



Autodesk

SHARP



globalbeach



JohnBurn



Elior



CREATIVE

Raymarine

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S3i Stainless Steel Solutions

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