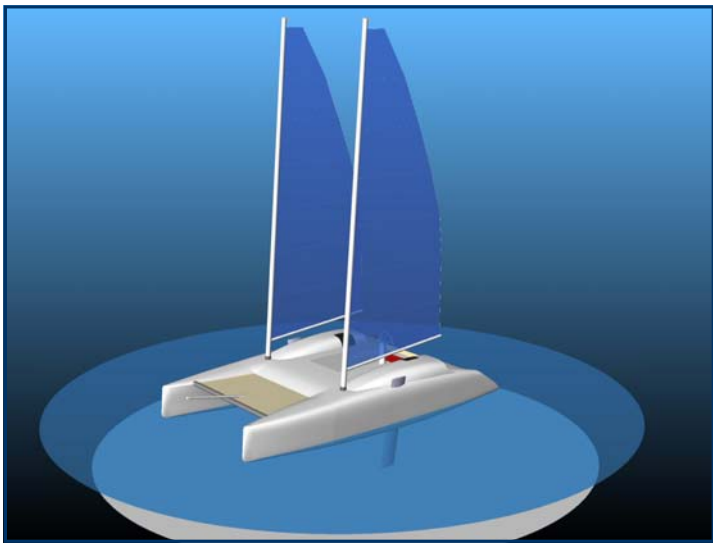
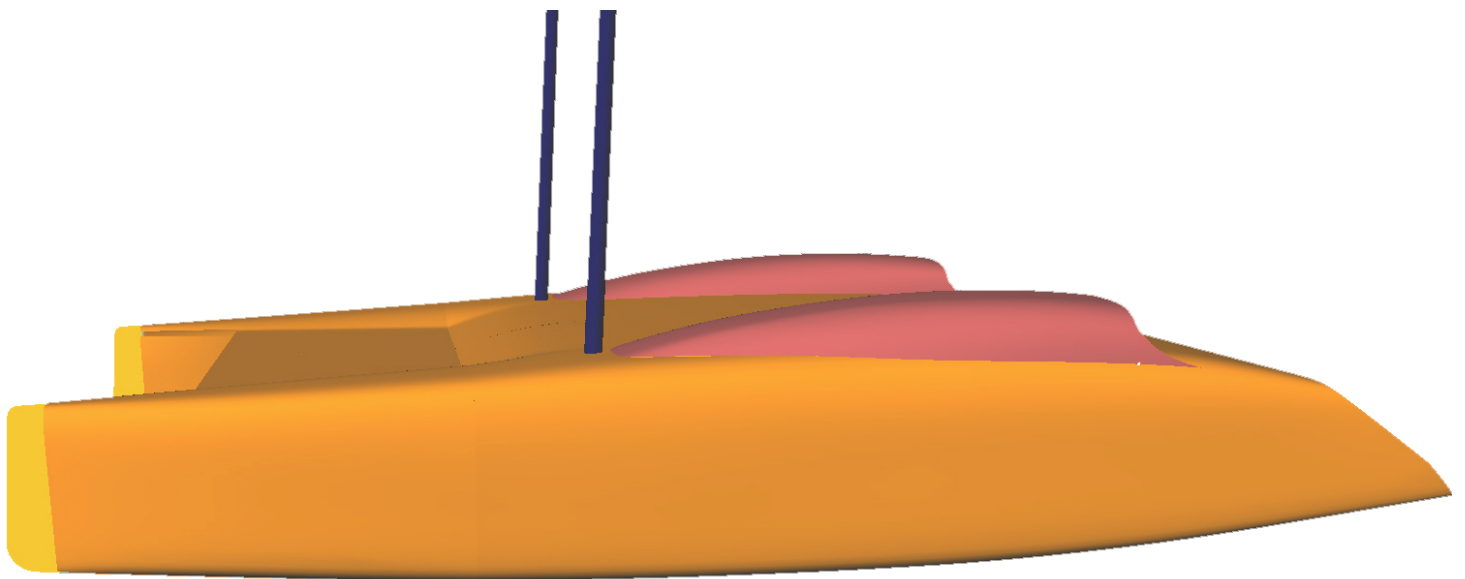


RB1060

Radical Bay 1060

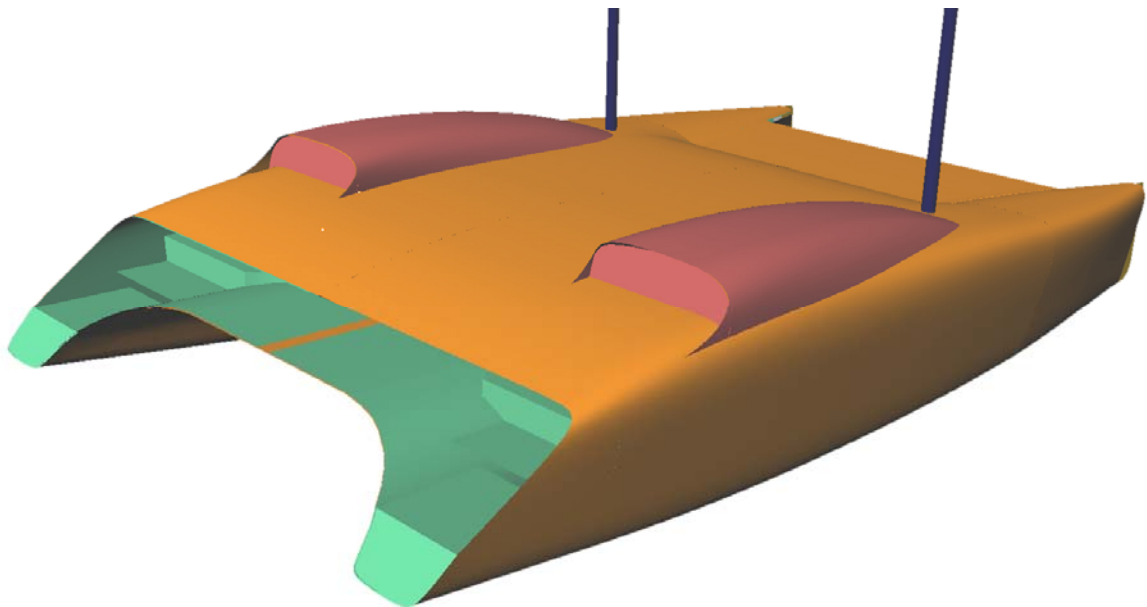
STUDY PLANS



Above Photo: Radical Bay 8000

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Hello and thank you for showing interest in our Design.

Schionning Marine is a family based Australian business, we are very passionate about our designs and continually strive to offer the best options to get you out there and make your dream a reality.

Choosing the right design can be a real challenge, there are so many options and variations and purposes a boat needs to meet. We will help you to determine which design will best suit your lifestyle and purpose, also your budget. We have plenty of options!

These Study plans contain a lot of information directed at the “OWNER BUILDER”, the aim being to show you how simple and achievable it really is and to help you determine whether you will be able to do it yourself. Be assured, hundreds of absolute novices have and are doing it so if you really want to build a boat, go for it, we will help you all the way.

If you are NOT an owner builder and would like to buy one of our designs, we work closely with several excellent boat building yards in Australia and overseas. Using one of these builders to build a custom boat for you, rather than buying a molded production boat is very rewarding, you can get exactly what you want and you'll be surprised just how well priced this can be too. Later re-sale value is high and the quality of a hand build composite boat, built by a recommended builder far out strips any production process in terms of strength, quality and lightness (therefore performance).

We look forward to hearing from you once you've studied the following pages. We have not included kit pricing due to the many variations and options so please email or call us and we'll furnish these on request.

Good luck with your research and project.

*Jeff, Lorraine, Brett and Ben Schionning
& Rob Shenn.*

DESIGN OVERVIEW

My first look at the twin rig concept was on the Radical Bay 1060 design but being very different, no-one was keen at the time to be the first in – understandable but frustrating. I was convinced this was a step forward for Multihulls and so decided to prove the concept by building her little sister – the Radical Bay 8000. You may have read some reports of her success, what a little beauty - the twin rigs are awesome and her success certainly silenced the critics. There are now many RB8000's under construction around the world and we are frequently asked for a bigger model, so here she finally is, the Radical Bay 1060.

She is a fast, seaworthy, easy-to-sail cat that will appeal to people coming from a 'beach-cat' background but now having to accommodate a young family. Primary to the design is an easy and economical build process using readily accessible materials. Built in smaller modules, she needs less space and one of the major advantages of the design is that she can be disassembled to either transport her in pieces on an ordinary trailer; on a semi or in two 40' containers.

I have perfectly balanced the centers to cater for either a single conventional mast or the twin rig option; this I feel gives her wider appeal allowing builders to choose their preference. Sail areas are similar and I expect speeds to be very close, the single rig will need more crew to handle the kites off wind while the twin option will be easier to push harder with limited crew, the twin screechers on furlers being easy to handle. The lower center of effort on the twin rig keeps rotation forces lower making it harder to fly a hull and harder to flip. This of course increases safety for the family.

She is finely balanced to be exactly what she is, not a compromised cat designed by a committee. Yes I'm aware that we could make

LOA	10.60 Metres
BOA	5.80 Metres
Draft	0.325 Metres
Headroom/ Bridgedeck	FULL
Headroom/ Hulls	1.9 metres
Mast Height (Single mast)	14.5 Metres
Mast Height (Bi-plane)	11.5 Metres
Displacement	2600 Kilograms
Payload	1800 Kilograms
Motor Option	30hp Outboard
Bridgedeck Clearance	0.675 Metres

the cabin longer, add more headroom and add more bunks but she then turns from a sleek Ferrari into a family station-wagon. This said, I feel she offers fantastic accommodation; headroom is good at 1900mm at the mid section and the sole is set low to give a sensual sleek profile. Headroom diminishes as you move forward along the double bunk and is lower in the forward single cabins but I am expecting these cabins to be occupied mainly by the kids, so it's not a major problem. The bunks are big enough for adults, they are 'dive-in' design with hatches above - which from experience is very comfortable. The double is big and spacious with the large head and shower set privately aft, this gives the cabin a nice ensuite feel.

Access into both hulls is easy via large hatches that hinge on the forward edge to stop spray getting in while under way. Spray and rain will no doubt get in at some point but in this event the wet areas are easy to mop up, and cannot wet any of the bunks. The port hull has a separate single cabin forward, double bunk with plenty of lockers amidships and a roomy head and shower aft. Headroom in the head area is forward diminishing aft, but the head is set aft where headroom is not needed.

The aft end of the cabin top will be an opening hatch adding an airy open feel.

Starboard offers a big usable galley aft, meaning you can work out of the traffic, plenty of lockers and being aft the heat and smells disappear out the hatch above. The dinette is set amidships which may seem strange at first with the raised floor not allowing walking forward. When I considered the headroom it made more sense this way as a galley wouldn't work in this forward position, plus a dinette would not work aft. The forward single cabin, as with the port option, has lower headroom and the dive-in bunk, a seat on the inboard side plus an overhead hatch makes this a comfortable cabin even for an adult.

The cockpit is deep enough to keep kids safe, is a good area for socializing and creates a safe working position. The single stick is on the forward beam and all systems can be run from the cockpit. The twin rig is also easily managed from this safe position. Tramps forward on both options are good playing areas for all.

Access on board is easy and safe by way of soft steps in each transom area stepping into the cockpit.

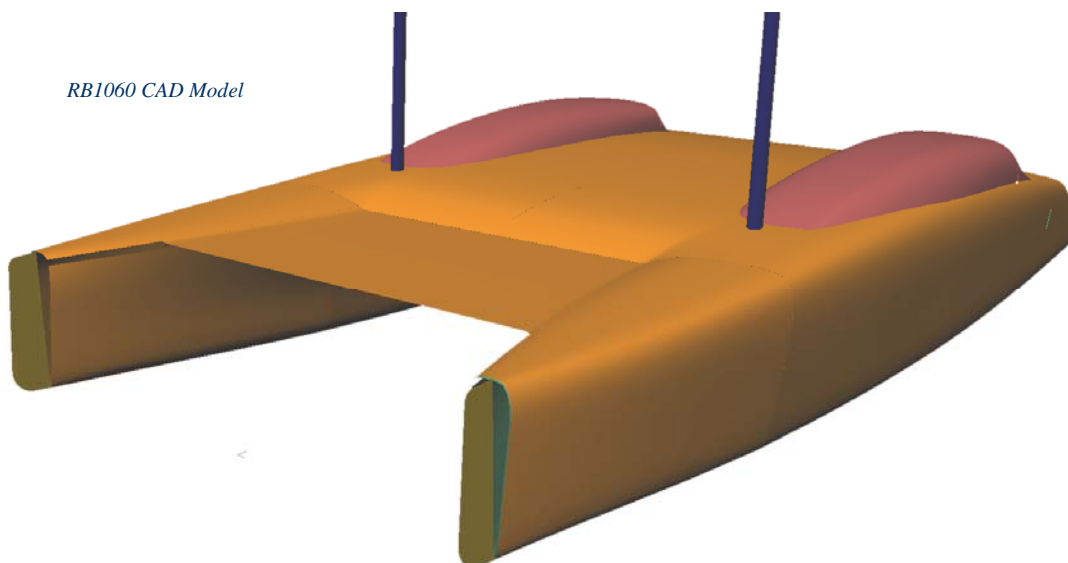
The goose neck can be set on a slide on the

single stick option, allowing the boom to be raised to full headroom under a boom tent, on the twin rig, simply fix the tent to each boom then pull up the tent mid section with the halyards for full shade.

Motor: A few groans here I suspect, I have opted for the single alloy tube pivoted forward which works extremely well, tested on our "Spudgun" and the RB8000. The tube doubles as the fuel tank, when up, clearance is excellent, and when down it works a treat. Handling is not as easy as twin motors but remember we are looking for simplicity, cost saving, weight saving and speed. I do not consider myself the best cat driver but I do know that having delivered a few of our single motor cats - after a bit of practice I felt no hesitation going into dead-end marina areas, confident I could park or get out.

Construction: I have chosen the sensible options here. Strip planked shells with flat panel bulkheads and flat areas; you can use Western Red Cedar, Kiri or Durakore planking and either foam or Duflex panels. The twin rigs will be carbon, either build your own or buy tubes. She's extremely simple to build with a new easy join system. Bridge deck will be a hard deck or soft tramp option.

RB1060 CAD Model



So there you have it! In my opinion, an awesome looking cat to make you proud every time you row out to her in that peaceful anchorage, speed to be exciting, safe enough to go anywhere, comfortable enough to live on and hey if you want to sail the Caribbean or Greek islands but don't want to cross oceans, put her in a container and meet her there.



The Above photographs are of the Radical Bay 8000 Interior, due to the Radical Bay 1060 being a brand new design and none on the water.



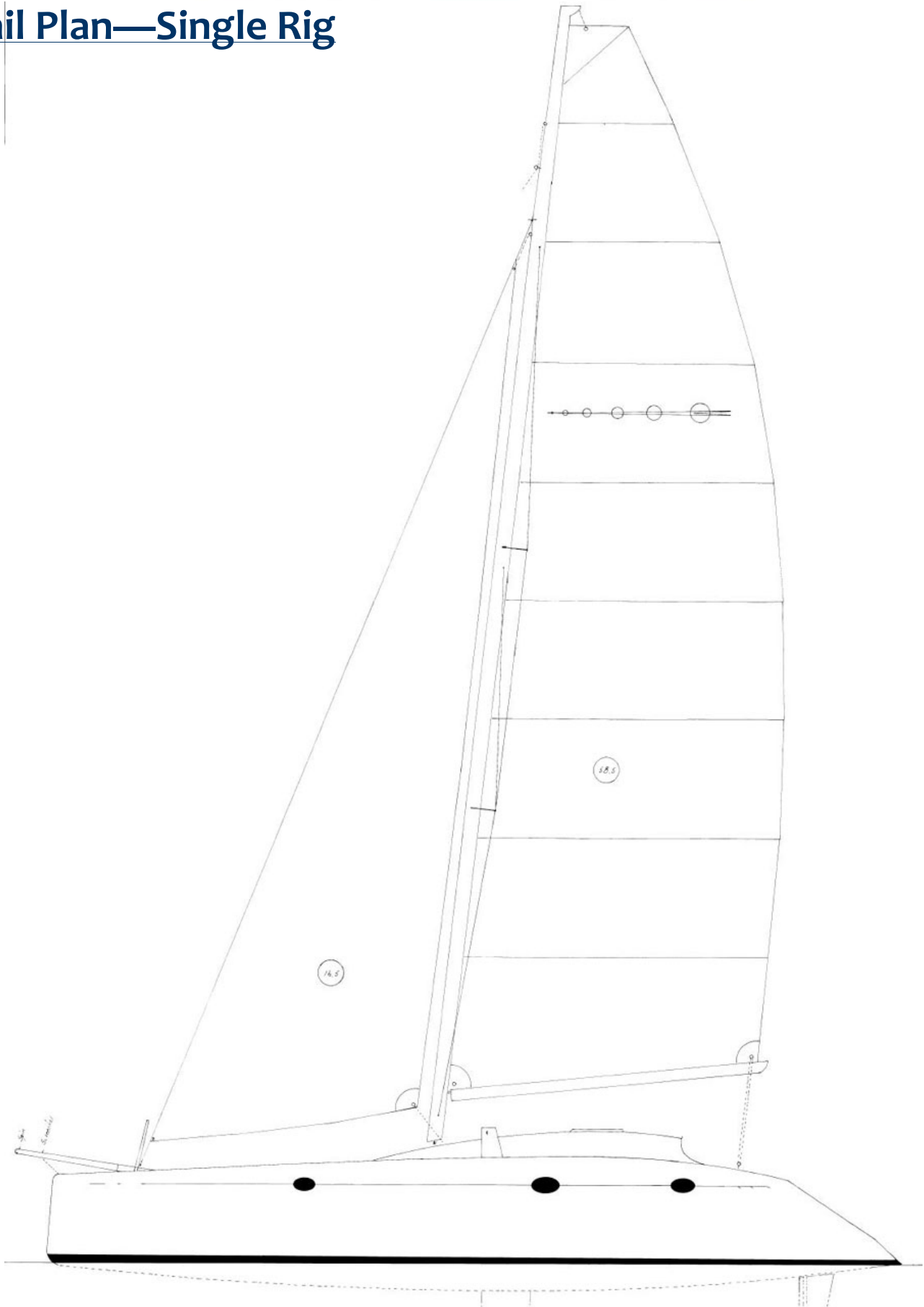
NOTE: Photos shown below are the Radical Bay 8000, showing the bi-plane rig option.



Sail Plan—Bi-plane

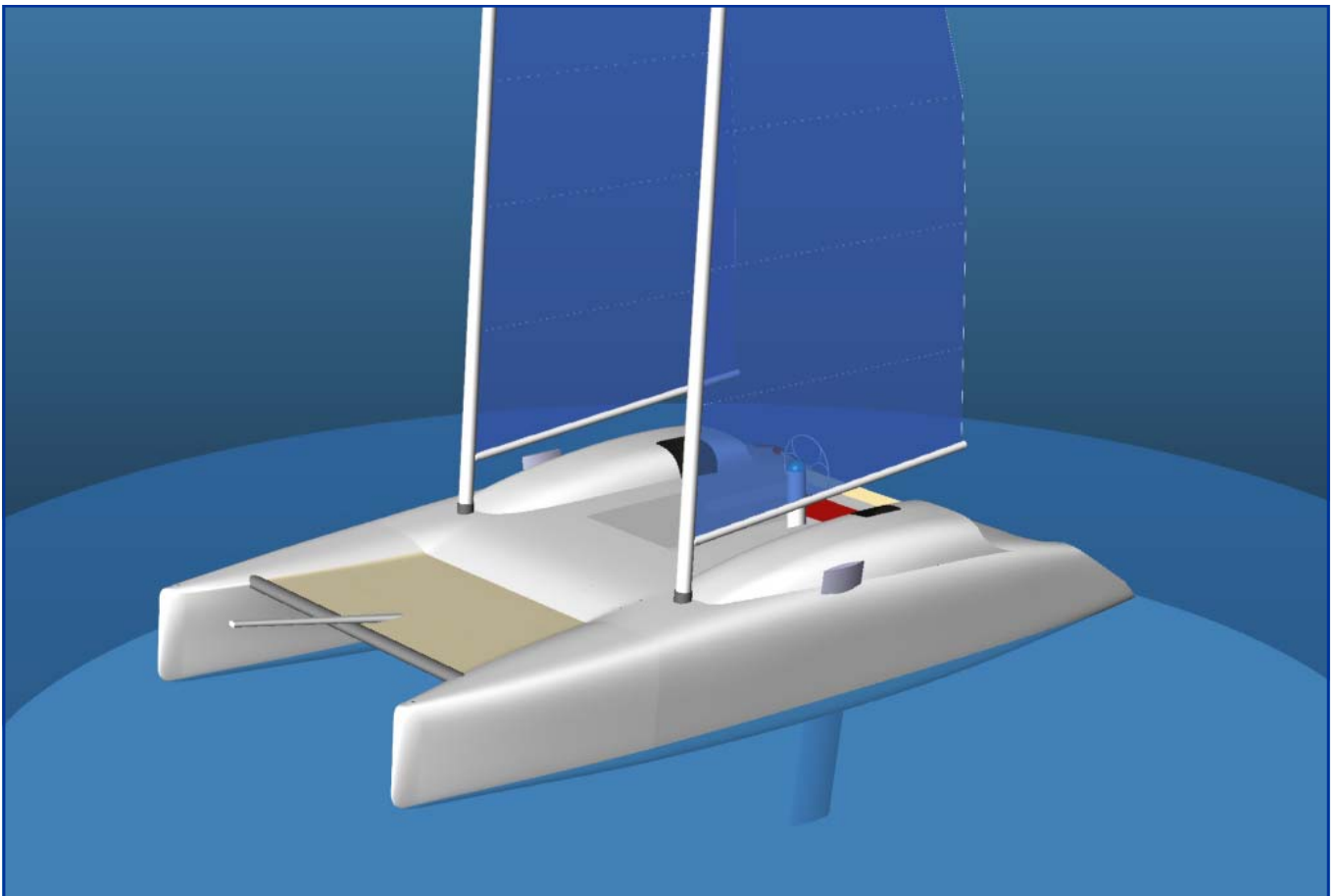
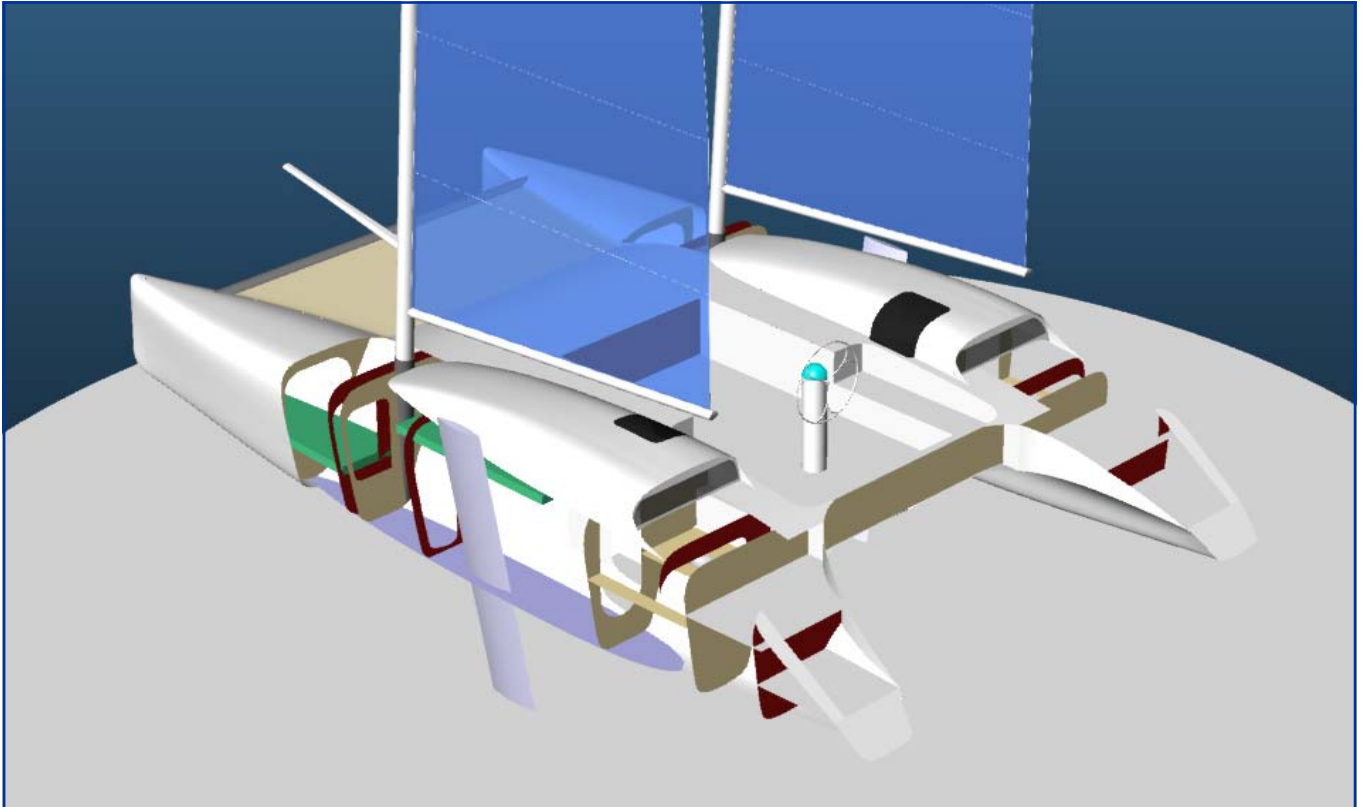


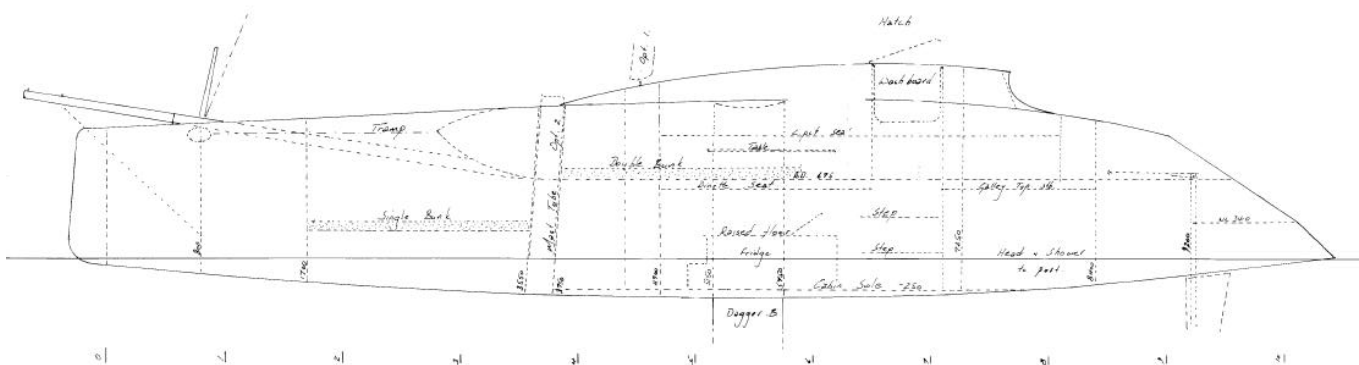
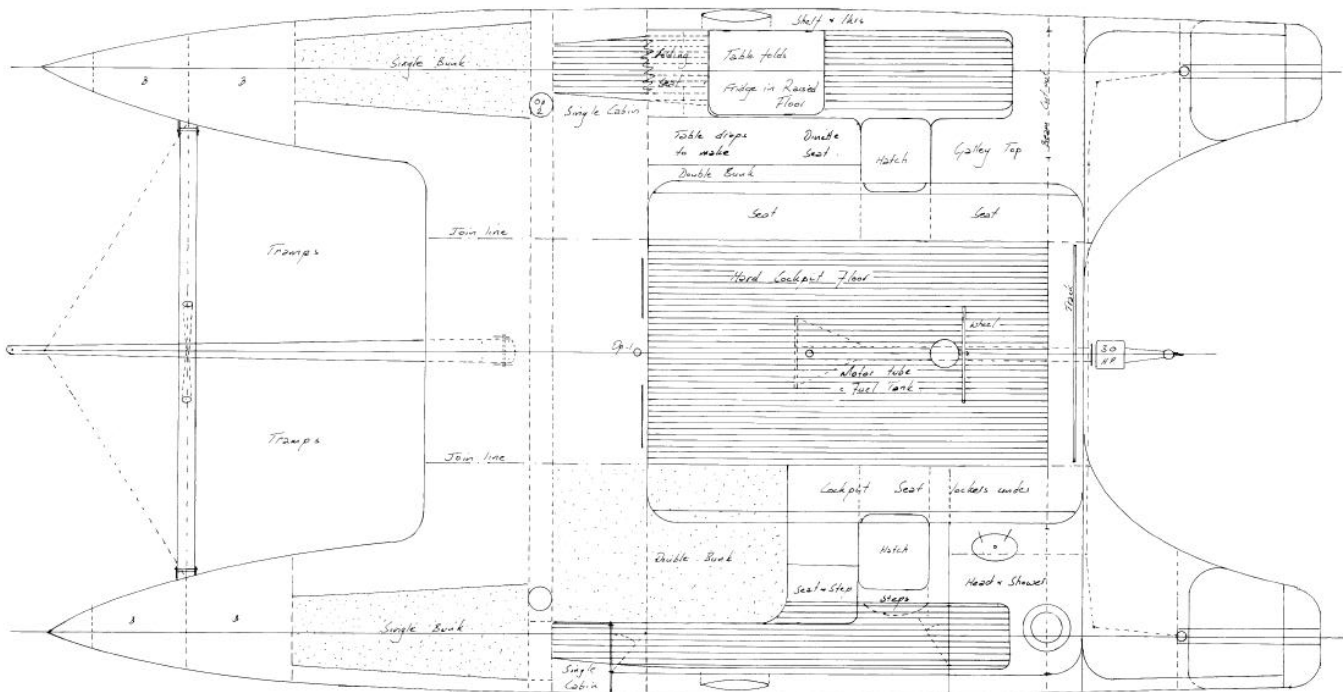
Sail Plan—Single Rig



Bi-Plane CAD Model





[illegible]

CONSTRUCTION OVERVIEW

THE MATERIALS

The Radical Bay 1060 can be built out of a choice of core material, besides making materials easier to source, your choice will depend on your performance preference and whether you wish to race the boat.

She is built in pieces and demountable for transporting. This makes her easier to handle during construction and less shed space is required.

The strip planked hull, decks and blister cabins can be stripped with either Durakore, Superlight Durakore, Western Red Cedar or Kiri timber, or foam strip. All flat areas such as bridgedeck, bulkheads and furniture use Duflex panels or glassed foam sheets.

THE CONSTRUCTION PROCESS

The hulls are strip planked over a male mould which you create from temporary frames, the hull is then glassed, turned and then cleaned and glassed inside, bulkheads are made from full size plots, glued and glassed into position in the hulls and the deck is then stripped up on the boat, glassed and then removed for internal glassing and fairing, then glued into place. The blister cabin can be made either on the boat at the same time as the decks are stripped or made separately and then fitted after the decks have been built.

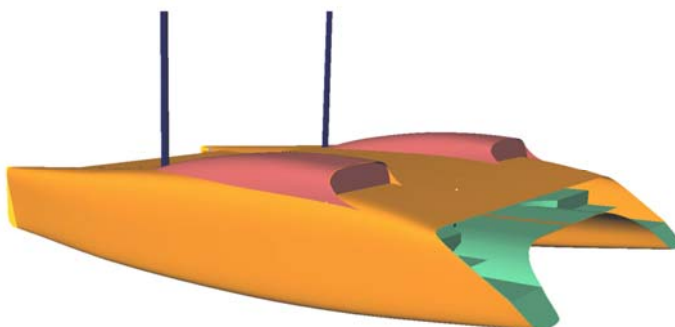
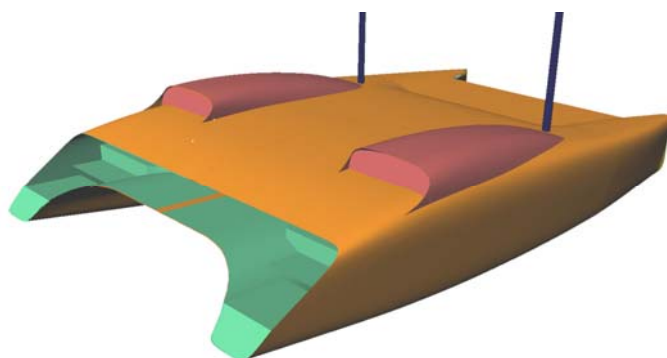
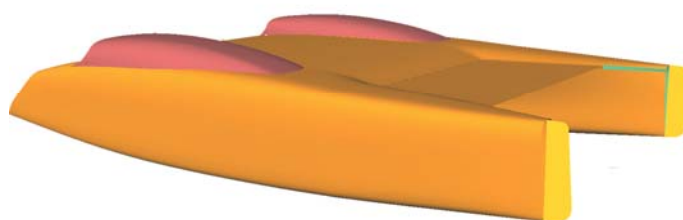
The Bridge-deck and composite beams are made in three pieces, the beams are Duflex box beam structures. Cockpit and furniture is also made from Duflex or foam sheets. No pre-cut kits are available.

Composite fitting give the finished product a very classy, modern look. Composite chainplates are extremely strong, look good and are easy D.I.Y.

If you would like more information on strip planking construction technique, contact us or ATL Composites who have a great brochure showing how it is done.

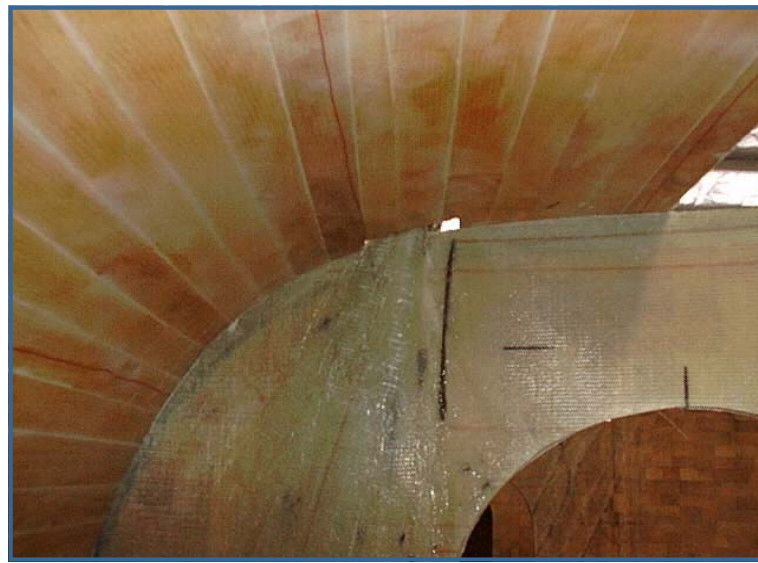
RIG OPTIONS

Bi plane carbon masts and boom are either owner built or professionally built. Single rig option uses a normal alloy mast.



CONSTRUCTION

Construction photo's are from various Wilderness Designs.



MATERIAL LIST—Radical Bay 1060

No	Item
	Durakore Planks - 2400 x 300mm
200	13mm
	Duflex Balsa - 1 x 600gm Biax each side 2400x1200mm
49	13mm
	West R105/206 Resin & Hardener
1	200 litre West System Resin
1	20 litre West System Hardener fast or slow
4	20 litre West System Resin
4	4 litre West System Hardener fast or slow
	Kinetix Laminating Resin & Hardener
1	192kg 246TX Laminating Resin
2	24 kg H160 Laminating Hardener Medium
	Powder Modifiers
8	20lt Microspheres (411)
4	20lt Microfibres (403)
2	170lt Microlight (410)
	Fibreglass Cloth (Colan Products)
190	450 g Double Bias (47 kg roll) kg
45	450g Uni directional (45 kg roll) kg
	Fibreglass Cut Strips (Colan Products)
28	450 g D/bias 105 mm (4.00 kg tape) kg
	Plywood - Gaboon 2440 x 1220mm
2	9mm
	WRC strip planking
60	10mm x 40mm F.S. (1m)
	Klegecell Foam 80 kg 2175 x 1220mm 2.65m2 / sheet
10.6	40mm sheet - per m2 pricing

NOTES FROM THE DESIGNER....

The success of our designs I feel, stems from the practical commonsense approach of a boat builder, coupled with many years of live aboard experience and 50 - 60,000 sea miles in some of the worst conditions in the world. This experience makes one aware of the power of the sea and the need for a boat to be able to survive these conditions, protect her crew physically and psychologically as well as being a fast comfortable vehicle for all the good times. I am sure you will find our designs reflect our sailing and live-aboard experience and will give you the offshore confidence to sail safely anywhere in the world. Multihulls are 'beautiful, safe, cruising boats'. We hope you find them as exciting as we do.

CHOOSING A DESIGN...

Choosing a design can be difficult so we hope that this introduction helps clear the way a little. We've taken particular care with the balance of construction methods in our designs, making them light and strong yet easy to build in small sections, most of which are manageable by a group of friends when they need turning over and moving. The blend of strip planking and light flat panels kept in single plane form, makes building easy and quick and produces a finished catamaran of classic good looks which will not date quickly, giving you very good investment security. One of the first steps in changing this dream into reality is figuring out whether you can afford the boat (or more likely, how much money you 'don't' have!). Two realities here are, firstly, two similar sized boats with similar displacement, built of similar materials will cost the same to build overall. Designers' estimates of materials are often inaccurate and sometimes minimized to lead one to believe their boat will be cheaper.

This is definitely not the case, **similar boat, similar price!** Your choice should therefore be towards the boat that suits you best and offers you good backup and is a good investment. Secondly, we know a lot of people who could not afford their boat at the onset so don't be discouraged. Once you start building it is surprising how you focus your interest, spare time and money into your new project. With our new owner-builders we suggest they start with the



smaller items which can be built in the garage, carport, (lounge?) etc. These initial items use very little material and money but use a lot of time, so at the early stages you can get a lot done while you wait for your old boat or car or house etc. to sell. These items are; dagger-boards and cases, motor pod, forward beam and catwalk, cabin roof, rudders, dinghy etc. The experience and confidence gained building these bits speeds up the second stage of larger items and gets the whole project finished much sooner.

WHAT MAKES A GOOD MULTIHULL?

Cat design is not just a matter of two hulls floating a cabin above the water. Only in fairly recent years have the basic elements of design and an understanding of their effect on the use and performance of the finished boat been understood. The basic principles of good design should all be present in the boat you're considering building or buying. These will blend together to produce an excellent Multihull.

THE BASICS ELEMENTS OF A GOOD DESIGN:

- GOOD ENGINEERING is obviously essential.
- FLAT DECKS. The flatter deck lines have a number of advantages. Secure footing while reefing, anchoring etc. in rough conditions, life lines are at a sensible protective height instead of set down a level. A flat deck is great for socializing, sunbathing or as a kids playground.
- BUOYANCY. Buoyancy distribution is the placement of buoyancy in the hulls. Our designs have between 50 and 60 separate buoyancy tanks built into every shell so they

“Sailing ability is important. We feel that good performance in a sailing cat is a real safety feature.”

are almost unsinkable. Most old designs hobbyhorse a lot making them uncomfortable and inefficient. Modern designs have the buoyancy pushed towards the hull ends damping down the hobby-horsing tendencies and giving a lot more safety downwind where the buoyant hulls stop nose-diving. Coupled with a lot of reserve buoyancy high up and forward in the hulls, this adds an enormous amount of safety and gives you confidence off the wind.

- A soft ‘V’d entry, quickly picking up reserve buoyancy with lots of reserve higher up is and ideal combination.

- BRIDGEDECK CLEARANCE. High Bridgedeck Clearance is essential. A short cabin length with long hull overhangs is a good safety feature. Good clearance on a cruising cat is 600mm – 800mm, a Performance cat 700mm – 900mm and a Racing cat 800mm – 1000mm. Chamfer panels add high reserve buoyancy and need less clearance than a similar cat without them.
- SAILING ABILITY AND PERFORMANCE. Power to weight ratios show how well a cat will sail in light conditions. As wind strength increases, one reefs the power to stay at safe acceptable speeds (this is different for different people). The Bruce Number is a commonly used value and very useful in comparing cats, displacement is not always reliable and will vary with load. A Bruce Number = 1 is very slow, 1.3 – 1.4 is a good cruising value, 1.5 – 1.9 reflects a very fast cat. Boats like the French 60’ Tri’s and “Club Med” are running to extremes like 2.3. A light and efficient cat can often sail out of trouble and outrun severe weather patterns, shorten passage times and avoid bad weather by getting there in the existing weather window. Most good designs will tack through 90 degrees at a speed of 8 - 10 knots while reaching at 10 - 13 knots comfortably with Main and No. 1 in 15 knots of wind. Daggerboards are efficient and allow very shallow draft for beaching. With a strong reinforced bottom as per our designs, it’s easy to run the cats up on any old beach. Should you want shallow keels to protect inboard motors, then a combination of shallow keels and fixed rudders are a good option, daggerboards would still be fitted as usual, giving the best of both worlds.

- **LOW DRAG.** This is a good characteristic. Slim hulls reduce drag and are efficient.

A good cruising cat would have a Waterline beam to length ratio of 11.5 to 12.5:1. A performance cruising cat 12.5 to 14:1 and a racing cat 14 to 20:1. It is important to note that **ALL** these elements must be present in a design to make any of them valid. For example, a design can be really good looking, have high bridge-deck clearance, a powerful rig and sail plan and be built reasonably light and show a fair displacement, but then have an 8:1 Beam to Length ratio. She'll be a good looking, powerful boat but it will be impossible to go forward, except slowly!

There is no reason why a good modern design does not have all of these features. If you find some of these lacking it is usually for the wrong reasons. A lot of cats have very little bridge-deck clearance because the designer is concentrating on a low profile cat which looks good or being dictated by interior accommodation and ignoring the fact that the boat will pound badly at sea. This is not only noisy and uncomfortable but can well be the cause of structural problems.

Our designs have been developed around these practical elements of good design then we accommodate personal comforts and lifestyle choices.

Good luck with your research and project, don't hesitate to contact us should you need further information or a chat about our designs. **Jeff**



G-Force 1400

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CONSTRUCTION PLANS

PLAN INDEX RADICAL BAY 1060		
A1 HAND DRAWN PLANS:	GENERAL CONSTRUCTION DRAWINGS:	
1/ Standard Sailplan	2a/ General Instructions	23/ Stanchion Base- Composite
2/ Twin Rig Sailplan	2b/ General Instructions	26/ Bridle & Striker Fittings- Composite
3/ Layout and Sections	2c/ General Instructions	30/ Prodder Anchor
4/ Glassing Details	13a,b&c/ Forebeam	31/ Trampoline Detail
5/ Strongback	15/ Forebeam Striker	32/ Escape Hatch Detail
6/ Bulkhead Details	17a/ Daggerboard & Case Sections	33/ Headsail Track- Fastening Detail
7/ Joining Details	17b/ Daggerboard Case Detail	35/ Windows
8/ Prodder Details	18/ Daggerboards-General	38/ Building Details
	19a/ Rudder Box- Kick-up	39/ Composite Steering Wheel
	19b/ Rudder Shaft- Kick-up	
	19c/ Rudder Profiles	

1:1 PAPER PLOT SHEETS

Temp Frames- Hulls

Bulkheads - Hulls

Blister Cabin Temp Frames

Steering Wheel

WHAT YOU GET WITH PLAN PURCHASE:

Brett Schionning has produced a CD-ROM that shows the Wilderness assembly and building techniques as well as loads of tips on the easiest way to do things with plenty of photographs for reference. It includes basic information such as what tools you require and product information and use, although it does not show this design, many of the techniques are the same.

PLANS INCLUDE:

- Full size, colour coded plots for bulkheads
- A3 Booklet of plans (see index this page)
- A1 Plan Sheets
- Backup support throughout your project

COST OF PLANS:

Radical Bay 1060 plans cost \$8,000.00 AUD

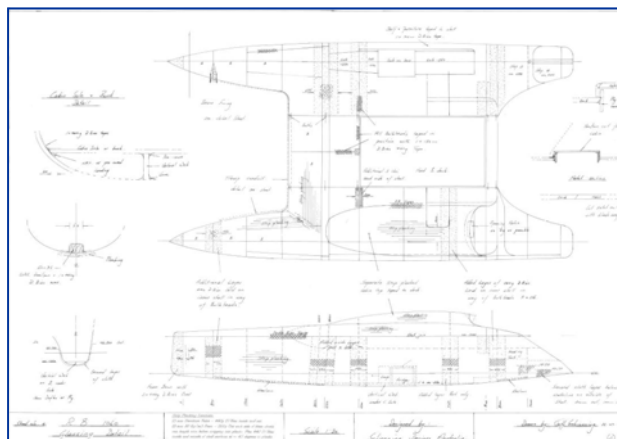
Price valid until 31st Oct 2008.

Includes GST in Australia

Includes shipping to any destination.

UNLIMITED BACK UP SERVICE:

Our back-up service is unlimited, our professional boat builder (Brett Schionning) will be here to guide you through any problems throughout your entire project. Email and phone support is available during business hours Monday to Friday.



AN EXAMPLE SHEET FROM RADICAL BAY 1060 CONSTRUCTION PLANS

HOW TO ORDER

HOW TO ORDER PLANS:

We require a signed and faxed or mailed PLAN ORDER FORM with every plan purchase. The Plan Purchase Order form explains our terms and conditions and plans will not be mailed until a signed order form is received.
(See form included in study plans)

PAYMENT:

WE ACCEPT: Bank cheques or direct deposit into our bank account. Our account details are on the order form. Credit cards are not accepted for plan purchases.

SHIPPING:

Plans are sent by express mail within Australia and by courier to other countries at no extra charge to you.

HOW TO ORDER PLANS:

- Complete the attached PLAN PURCHASE ORDER form and mail or fax it back to us on (02) 4982 4722.
- Deposit payment to Schionning Design's Account, (details on order form).
- When payment and your order are received your construction plans will be assembled, checked and mailed within 7—10 days to your nominated address.

MATERIAL ORDERS:

Construction plans must be ordered before (or at the same time) as your materials.

- Contact Schionning Marine for a Material quote when you are ready to order.
- We will invoice you, 50% of the invoice value is required upon order, deposit to the account as shown on the invoice.
- You will also be asked to complete a second order form for the materials and on this form you will nominate whether you would like us

to insure the materials during transit (cost is 0.75% of the invoice value) and you'll need to provide us the delivery address.

- We will notify you of the lead time (date) once the order is logged into the manufacturing schedule and we will contact you again about two weeks before your materials are ready for dispatch.
- You will then need to deposit the balance of the material's value, including freight and insurance if you nominated to use our services, into our account. Once this is received, the materials will be shipped to you.

ANY PROBLEMS, CONTACT US:

+61 (02) 4982 4858

Building a boat is definitely a challenge but with good plans, our helpful friendly support and the modern materials available, it's never been easier. The investment of time and money is very worthwhile, offering a rich life experience, fun reward when you launch her and financially you can certainly stand to gain substantially. We look forward to hearing from you again and wish you the very best with your project.



Milski family on launch day.