

Boat Review: **Roger Hill 14m semi-displacement powercat**



# BIRD of PREY

*Ørnen's* Australian owners cannot wait to cruise their new boat up and down the New South Wales Coast. John Eichelsheim took a sneak peek at Roger Hill's latest design, just after her launch from Alloy Cats in Tauranga.

**BOATING**  
NEW ZEALAND



The spacious, well-equipped galley is a good example of Ørnen's simple, practical interior layout with its emphasis on durable, easy-clean surfaces and materials



It comes as no surprise that the latest Roger Hill powercat, Ørnen – a 14m semi-displacement model – is headed across the ditch to Australia.

Australians have long understood the advantages of powercat designs, with their unmatched volume and stability for a given length, along with good performance and economy.

Ørnen (Danish/Norwegian for 'sea eagle') is bound for the New South Wales coal town of Newcastle but her owner expects to cruise her up and down the coast, including some long-range expeditions to Australia's tropical north. A fuel capacity of 2600 litres allows a 1000nm-plus range at displacement speed and over 600nm at 18 knots.

Ørnen is an interesting boat for many reasons. Combining aluminium hulls and decks with a fibreglass superstructure, she is not a new departure for designer Hill – Willie Torbet and his small team at Alloy Cats in Tauranga have built 11 boats to Hill's designs, 10 of them with composite tops.

Alloy Cats has evolved highly efficient processes, which Torbet claims sets it apart from many other alloy boatbuilders, reflected in

Ørnen's short build period of just eight months and the fine quality of the finished article.

Ørnen's unpainted, clear-coated hulls are unfaired – there's no bog anywhere, according to Torbet – but they're as straight and blemish-free as you could wish for.

"We rely on our trade skills and experience to minimise distortion during the construction process, and we've developed techniques to ensure the best possible result in aluminium. The addition of a composite top has also helped the look of the boat and its overall level of finish," Torbet explained.

The superstructure includes the flybridge and upper aft deck, which extends all the way back over the cockpit to provide rain and sun protection. Tauranga fibreglass specialists Hutchinsons are responsible for the fibreglass, plywood and foam composite superstructure, which is bonded to the alloy hull and decks using fastenings and adhesive. The fit is all but perfect.

### Design brief

Hill's brief was reasonably challenging. Ørnen's owner was quite specific about his requirements and also how much he wanted

to spend.

With 30 years of experience in a number of boats, Ørnen's owner was confident he wanted a power catamaran as his next boat for reasons of volume, comfort and stability. He was also keen on an aluminium-hulled boat. He was familiar with Hill's work through boat reviews in various magazines and took the opportunity to meet the Auckland-based designer and go aboard a similar sized Roger Hill cat at the Sanctuary Cove Boat Show in Queensland last year.

That set the ball rolling, and once he was satisfied with Hill's choice of builder, he worked with Hill on detail and layout changes, contracts were signed and the project kicked into gear.

"I was unfamiliar with the builder [Willie Torbet], but a visit to Sydney to inspect a 10m boat he'd built reassured me. The standard of workmanship was impressive, so my wife and I decided to go ahead with the boat," the owner said.

Ørnen had to come in at around \$NZ1 million (the addition of a genset, air-conditioning and teak took it a little over that amount), a relatively modest budget for a 14m twin-engine



boat, especially since catamarans are more expensive to build than monohulls of the same length.

The budget dictated an aluminium-composite hybrid rather than an all-composite boat, which the owner wasn't interested in anyway, but Hill is no stranger to either construction material. He's particularly happy with the way this 14m model has turned out.

Before we could take *Ørnen* for a run we had to remove a comprehensive set of cockpit and flybridge drop-covers, as well as window covers. These, explained Hill, are to protect the boat from coal dust when she's in her Newcastle marina berth, and to provide shade and privacy.

The covers removed, a spacious cockpit is revealed, complete with a now-trademark Roger Hill transom seat in teak. Teak is also used for the cockpit sole and the boat's wide swim platform, which is the best place to stand when cooking on the aft-facing barbecue built into the transom island beside the sink.

Either side of the bi-fold door into the saloon are lockers, providing stowage to port under the flybridge ladder and concealing paired stainless steel fridge and freezer units in a similar space to starboard. Tinted saloon

windows above the lockers slide open and six through-gunwale rodholders have been fitted.

*Ørnen's* cockpit hatches allow easy access to the Yanmar 370hp engines, one in each hull, via aluminium ladders. Torbet and the team are responsible for all the engineering, which is tidy and easy to service, and there's none of the cramping sometimes seen in catamaran installations.

The Yanmars are mounted low in the hulls, with the props running in tunnels to achieve the best possible shaft angle and minimum draft, with prop protection provided by a skeg in front of each tunnel.

### Excellent access

Access to the flybridge begins as stairs at cockpit level, morphing into a ladder so as not to obstruct the view through the portside rear window. The aft deck is vast, since it overhangs the whole cockpit, and is surrounded by stainless steel railings. A Davco davit launches *Ørnen's* Aquapro tender over the port side.

Visibility from the boat's only helm, which is well forward on the port side, is good. There's an excellent view over the foredeck, which is easy to access via *Ørnen's* wide side decks, but there's little reason to go there except when berthing (or to sun-bathe) since anchoring is achieved remotely from the helm.

Sliding side windows allow the helmsman to stick his head outside, and removable clears aft are easy enough to see through. There's no carpet on the upper deck so it's easily cleaned, but dark carpet under the windscreens reduces glare and three serious wipers ensure the screens remain clear of rain and spray.

The flybridge layout is simple, but practical; a wrap-around settee and a removable oval table makes for a sociable space beside the helmsman, who can perch comfortably behind the moulded helm console on an extra-wide bench seat. Behind the helm seat there's stowage and a handy sink unit, with more stowage under the settee and helm console.

Stowage is a strong suit with this boat, although as Hill points out, too much stowage can lead to overloaded boats, which impacts on performance.

### Performance

*Ørnen's* performance is right about where Hill expected it to be, despite the fact that the boat is under-propped.

Fuel consumption trials by Dieselcraft Evaluations show that the propellers are not absorbing all the horsepower available, causing the engines to over-run their recommended maximum revolutions and to hit the rev limiter at 3500rpm. Dieselcraft's calculation, based on fuel consumption at maximum rpm, estimates it is making use of only 300 of the 370hp available for each engine.

Even so, we achieved an average top speed of 23.5 knots at wide-open throttle (3500 at the rev limiter), which is pretty much where Hill expected the boat to be.

Re-pitching the props, which Hill has recommended to the owner, will result in a slightly higher top speed and more economical cruising throughout the range.

We cruised comfortably through a variety of sea conditions – Tauranga Harbour entrance can always be relied upon to throw up some interesting seas, especially in winter. Pushing the 16-tonne boat directly into head seas induced the odd wing-deck slap but we had a reasonable wave height to contend with, and a slight alteration to the angle of attack eliminated it completely.

At a cruise speed of 16 to 18 knots, progress was serene and the boat's quietness also impressed. Running downhill with a big swell behind us, *Ørnen* felt secure and tracked well.

### Easy living

In keeping with the boat's budgetary constraints, the saloon and hull cabins are simply furnished, but they give nothing away as far as finish goes. The aft galley is large, well equipped and extremely workable, with no-fuss Melteca worktops, rather than more exotic surfaces.

Cabinetry and panelling is attractive honey-coloured European beech, offsetting the light, airy feel of the saloon and complemented by large windows.

Forward, the main settee wraps around a



simple table and there's a second settee aft to port. Switch panels and the entertainment head unit is just inside the door, also on the port side.

Unusually, layouts are not identical inside the hulls. Companionways lead down into each hull, one from the middle of the saloon and the other from further aft. In the port hull there's a single berth aft with lots of locker stowage. The heads are positioned between the forward and aft cabins, corridor-style. There's a separate shower cubicle and doors at each end for privacy.

Forward is the spacious, air-conditioned master cabin with a generous double-berth oriented transversely across the hull. There's step-up access to the bed on both sides, which the owners appreciate.

The starboard hull has a slightly different layout, though it too features corridor-style heads between the cabins, this time without a separate shower cubicle, just a stall and curtain.

The forward cabin features a fore and aft double with a single transverse bunk above it and plenty of stowage under. Aft, squeezed in underneath the galley, is another double berth.

The cabins all benefit from air and light, courtesy of overhead hatches fitted into the boat's wide side decks, and opening ports.

Simple furnishings, vinyl cabin linings, Melteca and painted surfaces, varnished wood and good quality, hard-wearing carpets should provide an easy-care living space that will continue to look smart after years of use.

### Boating's verdict

*Ørnen* is a handsome, well-finished, well-behaved and practical cruiser that came in on budget and performs to specification, even in its current under-propped state. Boasting plenty of space and a respectable turn of speed, combined with a more-than-useful range and good fuel economy, it's easy to understand why her Australian owner is well pleased with his new boat.

"I couldn't be happier with the boat and the experience of working with Roger [Hill] and Willie [Torbet]. Their service has been excellent and I appreciate the way the whole project has been handled. After eight days aboard her in New Zealand, my wife and I are looking forward to enjoying *Ørnen* in home waters."

*Ørnen* was scheduled for shipping to Australia in mid-July. ■

### Roger Hill 14m powercat

name	<i>Ørnen</i>
designer	Roger Hill Yacht Design
builder	Alloy Cats Ltd
construction	Aluminium and fibreglass-timber-foam composite
loa	14.015m
lwl	12.290m
boa	5.566m
draft	1m
displacement	light/heavy13/16 tonnes
max speed	24 knots
cruising speed	16-18 knots
fuel capacity	2400 litres
range	605nm at 18 knots
water capacity	915 litres
black water	300 litres
engines	2 x Yanmar 6LYA-STP 370hp
gearboxes	ZF 2.43:1 ratio
propellers	Briski five-blade 22.75-in diameter by 25.75-in pitch
price as reviewed	\$NZ1.1million

## **Performance report**

### **Roger Hill semi-displacement 14m powercat**

**power** Twin Yanmar 370hp at 3300 rpm

**gear ratio** 2.43:1

**prop** Briski 5 blade, 22.75" dia by 25.75" pitch

<b>Indicated Eng. RPM</b>	<b>Litres/Hour Single</b>	<b>Litres/Hour Both</b>	<b>Corrected Speed</b>	<b>Litres per Nautical Mile</b>	<b>Range Naut.Miles</b>
800	2.5	5.0	4.9	1.03	2,095
1000	3.2	6.4	5.7	1.12	1,924
1200	5.5	11.0	6.6	1.67	1,296
1400	7.2	14.4	7.3	1.99	1,088
1600	10.5	21.0	8.6	2.44	885
1800	13.9	27.8	9.6	2.91	742
2000	17.9	35.8	10.0	3.58	603
2200	18.6	37.2	11.0	3.40	636
2400	24.6	49.2	12.8	3.84	562
2600	27.1	54.2	15.2	3.57	606
2800	31.5	63.0	17.7	3.57	605
3000	37.6	75.2	19.7	3.83	564
3200	46.1	92.2	21.1	4.37	494
3400	54.0	108.0	22.4	4.83	447
3520	63.4	126.8	23.5	5.41	399

**Note:** Range is based on 90% of total fuel capacity, and calm conditions.

Vessel tested with 50% fuel and 4 POB. Figures produced by Dieselcraft Evaluations.