

## TURBO-JET IN BEACH BOATS

Length overall . . . . .	25' (7.620 m.)	Length waterline . . . . .	23' (7.010 m.)
Beam . . . . .	8' (2.438 m.)	Draught . . . . .	9" (0.228 m.)
Displacement . . . . .	5 tons	Speed . . . . .	34 knots
Engines: Two Austin		Speed ratio . . . . .	7:3
Healey . . . . .	124 h.p. = 248 h.p.	Rise of floor aft . . . . .	10°
Propellers . . . . .	Two Dowty 7½" jet units		
Beam length ratio . . . . .	3.125 to 1		
Rise of floor amidships . . . . .	15°		

*Designer:* FRED COOPER

*Builder:* J. W. POCKOCK & CO. LTD.

*Owner:* J. W. POCKOCK

A PASSENGER launch must be reliable and able to operate in most weather or she will lose a lot of trade. This vessel was designed to suit the spring, summer and autumn weather of Margate in the Thames estuary.

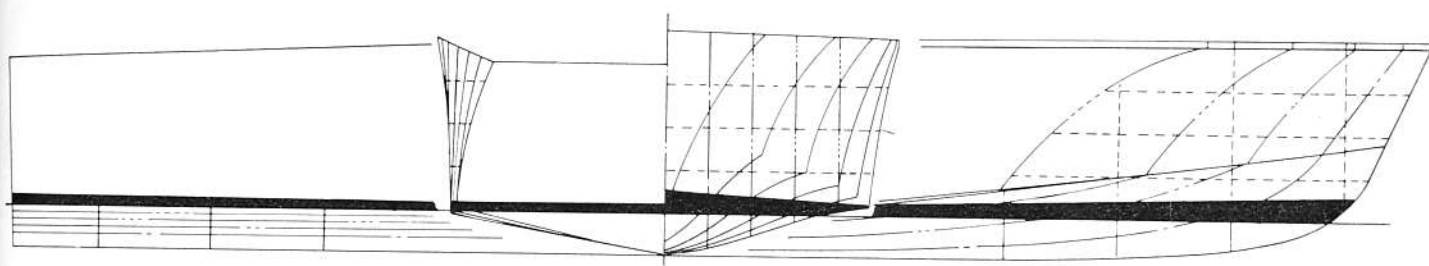
The sections which are plumb at stem naturally flatten to 15° amidships and 10° at the stern to give the maximum lift possible with a fair degree of comfort.

It will be noted the bow sections are given a rounded bottom so that, if the ship were caught out in such a sea that she had to go very slow or heave to, there would be enough displacement and buoyancy here to keep her head up and cushion the bows in a head sea. The topsides forward flare off to keep down spray, and tumble home slightly aft for looks and also to ease the air suction on the vessel.

Her hog piece is of mahogany 3½" × 1½". It runs from the stern right through to the stem which is built up

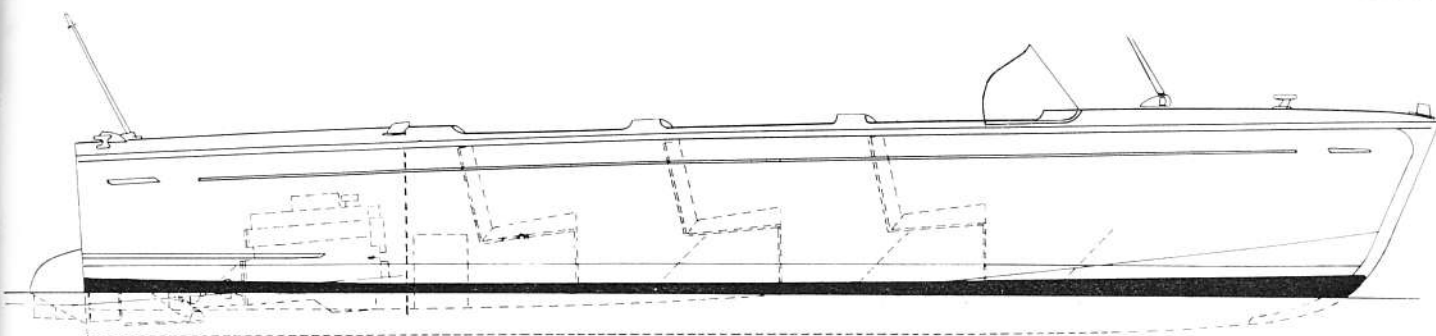
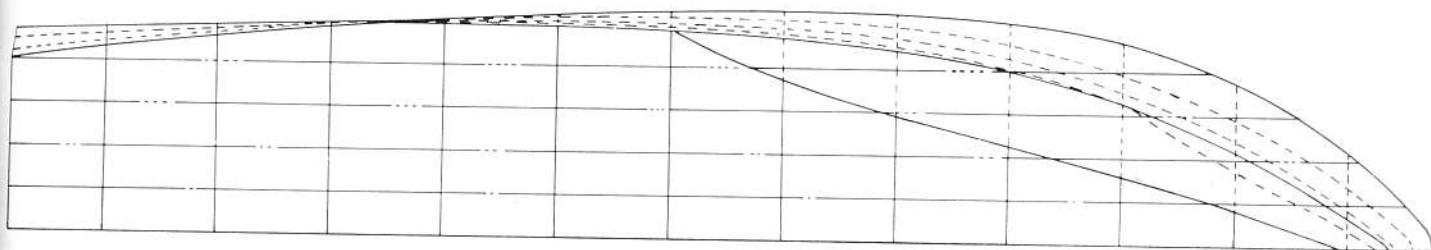


The turbo-jet Beach Boat *Jet Spray* dashing over the water with eleven people straight off the beach.



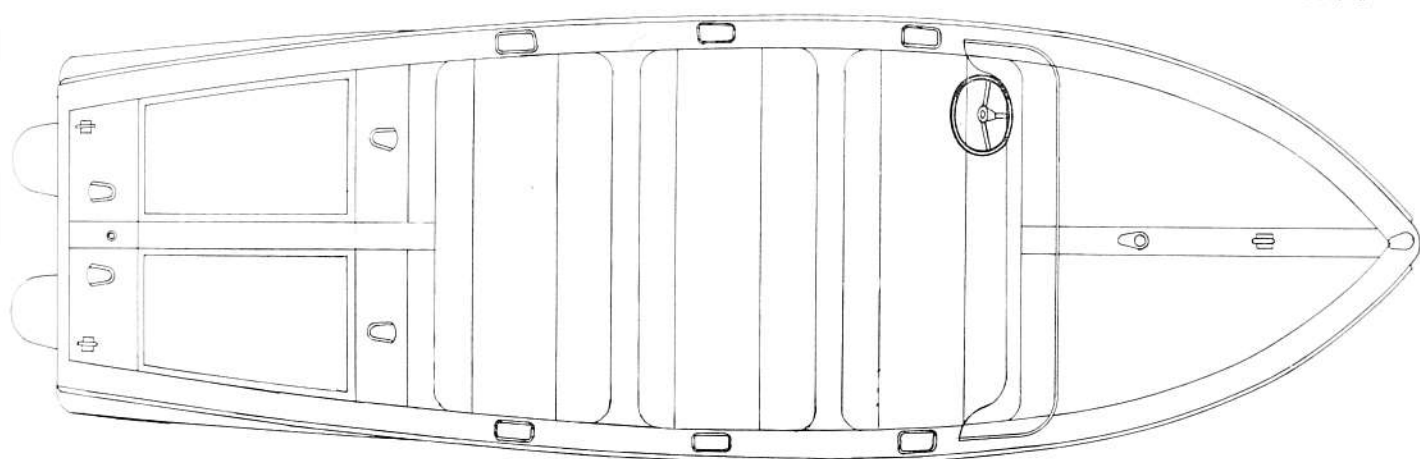
## *TURBO-JET BEACH BOAT*

SCALE FEET  
SCALE METRES



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This boat was designed to work straight off a beach, made possible by the powerful turbo-jet unit with nothing extending below the bottom of the vessel.

of three pieces of wood, two forming the stem itself and one stem knee, all being cut to take different angles of the planking in the ever changing form at the bow.

The frames are  $\frac{3}{4}$ " mahogany, varying in width from  $3\frac{1}{4}$ " at the keel to 3" at the chine, then tapering away to  $2\frac{1}{2}$ " at the gunwale. This saves all possible weight while still giving the strength required. Into these are let the chine-rails,  $2\frac{1}{2}$ "  $\times$   $1\frac{3}{8}$ " tapering to  $1\frac{1}{2}$ "  $\times$   $1\frac{1}{4}$ " aft, and also on the centreline in the bottom the hog piece.

At the top corner the gunwales,  $2\frac{1}{2}$ "  $\times$   $1\frac{3}{4}$ " tapering to  $1\frac{3}{4}$ "  $\times$   $1\frac{1}{4}$ " aft are let in, while in the bottom and topsides the stringers,  $1\frac{1}{8}$ "  $\times$   $\frac{5}{8}$ ", are let into each frame to reduce the size of the panels.

Over all this is laid the planking. The inner skin of the bottom planking is  $\frac{1}{4}$ " thick, the outer skin  $\frac{3}{8}$ " thick, and both laid at an angle of  $45^\circ$ . The side planking is thinner, being  $\frac{1}{4}$ " at a  $45^\circ$  angle, the outer skin also  $\frac{1}{4}$ " thick at  $30^\circ$ . Her deck is covered by  $\frac{3}{8}$ " plydeck.

The transom is also planked up with two thicknesses; the inner skin of  $\frac{1}{4}$ " mahogany vertical, an outer skin of a  $\frac{1}{4}$ " mahogany horizontal.

So we see that this boat, though lightly built is quite strong, for just as 'a little and often' is the secret of stoking and keeping a good fire, so it is when we are trying to get strength with lightness. We must never put unnecessary weight into a boat as this cuts down her carrying load. In the old days when coach builders and wheelwrights made the great farm waggons, all the meat was in the timber where it was needed, the spokes their full size and strength as they entered the hub and the felloes of the wheel and were rounded away in between by a spokeshave (which takes its name from its work in shaving away the spokes). Similarly, all the timbers of the waggon maintained their full size and strength where their bolts attached them to each other.

It is quite easy to make a thing strong; we only have to put in a mass of material to get strength. What is difficult is to make something strong with the minimum weight to obtain this strength. This is where the good naval architect shows up, for he has the required knowledge of building and construction, and of the strength and weaknesses of the various materials he is able to use. It is for this reason that whenever I design a boat I have her classed by Lloyds and built to their survey. Lloyds' activities extend all over the world, and this non-profit-making concern has surveyed and classified a tremendous number of boats and ships, so their guidance is of great value.

The arrangement is as one would expect on a large yacht's launch, used as a hack boat taking the owner and his guests ashore or members of the crew catering, etc. There is a short foredeck and the steersman has room for three people abreast him. The boat is fitted with comfortable seating room for twelve passengers, for only the last 6' is given over to the twin engines and its two turbo-jet units. These are easily accessible through the two hatches in the after deck which are a little longer and wider than the engines themselves, so that they may be lifted in and out easily.

Here we see a high speed launch able to run on and off a beach, and one that cannot damage her propellers or rudders, as she has nothing extending below her bottom to be harmed. She has carried over 125,000 passengers through all weathers for six years and is well suited to her work.