Design 055 – Basic Specification

Measurements	Metric system throughout, unless otherwise noted (screw lengths and gauges for example). All linear dimensions are given in millimetres (and "mm" is not always suffixed to the numbers).
Solid Timber	Mahogany, Brazilian or African (often now called Ghana Mahogany), or Red Meranti for solid timber work. Most other hardwoods and softwoods are suitable but avoid Teak, Iroko and European Oak for structural lamination and bonding (with the exception of the teak laid to the decks). Avoid softwoods with a high resin content (e.g. Pitchpine) or softwoods with large or loose knots. Khaya veneers are used for many laminating purposes (Red Meranti or African Mahogany would also be suitable). For timbers that are used extensively in the boat, it is preferable to choose timbers with a density of 550g/m3 or less so as not to build up excessive structure weight. Buy all timber kiln dried if possible and store in dry and well ventilated conditions. Stick between baulks/planks of timber to allow good air circulation. Moisture content of timber should be 12% or less. The timber types given in the specifications below are those considered most suitable. If you wish to build from ecologically sustainable sources, then please come back to us for a specification of suitable timbers.
Plywood	Must be WBP (water & boil proof) grade minimum. 5-ply is better than 3-ply (applies to ≤6mm thickness - thicker ply will automatically be 5-ply or more). Far Eastern WPB grade is usually satisfactory but the surface finish is not always very good and it is heavy. Marine Grade Gaboon ply is ideal - light weigh, good structure and good surface grain. BS 1088 is a special (pre-WEST) marine grade - but this is not structurally necessary. If the boat is to be clear finished, choose a ply with a good face veneer. If the boat is to be painted, good quality WBP Douglas Fir or Birch ply is satisfactory. If decoratively veneered ply is used structurally, the decorative veneers must also bonded on with be WBP grade adhesives - and this is often difficult to source. Plywood from ecologically sustainable sources is difficult. The only plys available that approaches this are Finnish birch ply and North American Douglas Fir ply. Both these (in the

	correct grades) are suitable structurally, but the surface veneers are not really very decorative.
Coating system	WEST™ wood epoxy materials. Use #105 Resin with #205 fast hardener (#206 slow hardener will seldom be necessary). If a clear (varnish) finish is required to larger panels then use #207 coating hardener (note different ratio mix). Minimum three coats on all structures and areas of the boat.
Glue	WEST™ #105/#205 resin mix modified with #403 microfibres (about 7% to 10% by weight - but you will soon judge better by consistency which should be a thickish paste, but still runny). End grain and absorbent timbers to be wetted out with #105/#205 and allowed to stand for 15 minutes before gluing with resin/#403 mix. Pre-coated areas (where the WEST™ coating has gone off to be sanded thoroughly and any surface "sweat" removed. Timber direct from the saw is suitable for gluing. Timber from the planer can be shiny, with the surface cells compressed - roughen slightly with medium abrasive paper. See also WEST™ fact sheet.
Filleting	WEST™ #105/#205 resin mix modified with #405 filleting blend.
Decorative finishes	Clear finishes should be UV resistant. We recommend that one coat of 2-pot varnish is applied before using conventional varnishes - otherwise the conventional varnish may have difficulty in curing. The same applies to paint finishes - one coat of 2-pot first, then conventional or acrylic.
Fastenings	Very few fastenings are required. Brass or stainless countersunk wood screws are fine. Use a Stanley "screwsink" of the correct size for the screw when boring off for screws to obtain best hold and clean countersinks. Stanley "plugcutters" are available for each gauge of screw and the dowels produced match the countersink made by the screwsink. Where screws are not to be dowelled over (glue dowels in with WEST™), or filled over with WEST/#407 microballons, fudge plenty of WEST™ down screw hole (a pipe cleaner is ideal for this). Wax screw if it is required to be withdrawn later.
Apron	60mm sided x 24mm moulded, laminated from 4 x 6mm laminates or a greater quantity of thinner laminates.

Design 055 – Basic Specification

Bilge runners	15 x 30 mahogany.
Centrecase	9mm plywood sides, with 35 x 25 mahogany logs. 25 x 40 mahogany posts and 15 x 40 mahogany stiffeners. Runners 100 x 15 mahogany.
Centreboard	12mm aluminium alloy 5083.
Decks	6mm ply.
Deck carlings	25 x 12 mahogany
Deck stringers	20 x 12 mahogany.
Floorboards	15mm mahogany.
Hog	120mm sided x 25mm moulded mahogany
Hull skin	Inner skin 6mm Douglas Fir or Western Red Cedar strip planking; 2 off outer skins 3·0mm nominal Khaya veneers
Keel	Mahogany or Douglas Fir. 25mm laminates.
Keel deadwood	Mahogany or Douglas Fir
Mast step	25mm sided Mahogany.
Rudder	13mm & 15mm Mahogany
Spars	Douglas Fir or Silver Spruce.
Seats	40 sx 20 Mahogany slats.
Shelf	12 x 50 Mahogany or Douglas Fir
Stem	50mm moulded, laminated from 5 x 10mm Mahogany laminates, or greater number of thinner laminates.
Stern knee	40mm sided Mahogany.
Stern post	40 x 15 Mahogany
Thwarts	20mm Mahogany.
Tiller	Mahogany, Oak or Ash.

Transom	18mm (or 2 x 9mm) plywood or 18mm solid mahogany, with 15mm fashion pieces
Useful WEST™ System reading and viewing	Basic application technique VHS training video. The Gougeon Bros. on Boat Construction (really required reading). WEST™ system Technical Manual.