

Standard Specifications & General Information

HARDWOOD CONSTRUCTION

- For painted conservatories and roof lanterns (skylights) standard roof and frame construction is in Sapele hardwood, with window leaves in Idigbo. Sapele is a dense African hardwood, stronger than American or Honduran Mahogany. It has a fine texture with good machining workability. It averages about 674 kg/m³ (42lb/ft³) at 12% moisture content and its mechanical properties are generally higher than those of White Oak. Idigbo is also an African Hardwood with low movement in service. Both hardwoods display excellent properties of durability, paint adhesion and resistance to indentation.
- The British government requires that these timbers be imported from managed sources.
- For non-painted conservatories and roof lanterns, we recommend either Oak or Iroko construction, or stained Sapele interiors with painted Sapele exteriors.

GLAZED ROOFS

- Roof pitch is set as appropriate to each design and as the constraints of the site allow. There is no limit to pitch.
- Roofs are primarily constructed from delicately molded 45mm x 140mm (1 3/4" x 5 1/2") section glazing bars (rafters), hips, valleys, profiled roof plates, and substantial ridge and wall plates.
- Roofs are engineered to North American snow, wind and seismic loads. We meet or exceed local code requirements.
- A range of roof ornamentation including turned timber finials, cast metal and RGP finials, cast metal ridge cresting and copper clad finials for some shapes.
- Glass is mounted on an aluminum frame with an integrated weep gutter channel to the eave. A compression clip with multi-fin gasket secures the glass to the frame, all of which is covered by exterior rafter cappings pre-finished in long-lasting urethane enamel to minimize maintenance on the areas most difficult to access. Powder-coated aluminum is recommended for coastal locations. See GLAZING-ROOF.
- Color choices included a range of 376 colors from the B.S. (British Standard) and RAL color charts. Within that range are 27 standard colors which are included in the price of the conservatory with an additional 1000 colors available from the Sikkens color chart.
- Where specified, gable designs can include intricate radial or tracery glazing patterns, all in individually shaped true-divided single or double panes or applied or genuine leaded light panes.

- Where specified, feature lanterns (surmounting a conservatory roof) and independent roof lanterns (skylights) can include glazed side-frames. The lantern side-frame windows can include intricate radial or tracery glazing patterns in individually shaped true-divided single or double panes, applied lead or genuine leaded light panes.
- When required, the roof construction is augmented by internal roof tie bars, cast metal braces and timber encased steel framing, galvanized or red-oxidized to resist corrosion. Steel framing includes flat steel, flitch plates, tube steel and steel spider joints at rafter/boss connections where required.
- Recessed electrical conduit channels with flush fitting demountable access covers are incorporated within the underside of roof ridges and rafters where needed. *In North America, mountable boss pendants can be specified with decorative disks to accommodate electrical boxes.*

ROOF VENTILATION

(operable vents and passive vents)

- Optimum provision for ventilation is by window-type ventilators mounted at the top of roof slopes adjacent to the ridge or wall-plate (lean-to design). Typically detailed as single or two-pane, top-hung aluminum framed casements are designed to correspond with the arrangement of the roof rafters. Optimum operation is by chain actuated electrical openers, including variable thermostatic control, rain sensor setting and manual override. *(Electrical connection is by others).* Alternatively, manual operation is by worm-screw openers and an elegant hand pole. *Removable vent screens are standard for North America.*
- For glazed roofs with feature lanterns, the description of top-hung opening windows within clerestory framing is appropriate. See WALL-FRAMES.
- Where ridge mounted opening vents cannot be specified, we offer alternative means of roof ventilation: mechanical fan housed within a roof pinnacle (kingpost); passive trickle vents within a roof ridge; on top-hung outward opening windows within lantern side-frames.

FLAT ROOF

(where specified surmounting or adjacent to a glazed roof)

- Where suggested in our design, we supply pre-built flat roof sections with built in slopes for drainage. The construction consists of preservative treated timber joists, premium brand high-performance foil backed insulation, furring, external quality ply deck and weathering upstand. Steel channels and/or I-beams are incorporated where necessary.
- The flat roof exterior is prepared to accept a choice of weathering finishes: heavy gauge aluminum or lead. *In North America, preferred finishes are copper, lead-coated copper, rubber ply or EPDM membranes. Final metal or membrane covering is by others.*
- The flat roof interior is prepared to accept a choice of finishes: premium grade ply; tongue and grooved match boarding by Town & Country; builders work plasterboard (drywall) or skimmed plaster finish by others.

RAINWATER GOODS

(gutters and down pipes)

- All guttering is in heavy-gauge aluminum, sufficient to support the weight of ladders to or on the roof and workers.
- Glazed roof elevations drain externally into large section ogee pattern cornice guttering, essentially laid level with discreet internal joints.
- Where adjacent to new or existing structures, or where an entablature is specified above the glazed wall-frames (typical of orangeries), the glazed roof elevations drain into substantial parapet/box guttering with a built-in pitch and incorporating stepped junctions, if needed. Beneath these gutters is the structural timber frame, steel bracketing and steel channeling that support the adjacent roof plate and the gutters themselves. The internal vertical face of this assembly is finished in profiled MDF or recessed molded paneling. The internal underside of this assembly is finished in tongue and groove matched boarding by Town & Country, premium grade ply, drywall or skimmed plaster finish by others.
- Rainwater is discharged by aluminum down pipes and, where appropriate, aluminum hoppers.

WALL-FRAMES

(doors and windows plus frame assembly)

- Our wall-frames are constructed from 92mm (3-5/8inches) section rebated jambs, head rails, transoms, substantial mid-sills and thresholds.
- Wall-frames are sub-divided into an arrangement of bays, as defined by the structural jambs. Within each bay all door and window leaves are individually framed.
- Frames are secured to base construction with engineer specified anchors including epoxied anchors, lag screws, expansion bolts and tapcons, depending on the underlying substrate.
- The wall-frames can include a clerestory (transom windows). This row of individually framed windows above the doors and windows can be built above the side frames or as part of a full height frame. The arrangement of the clerestory frame typically follows that of the doors and windows below. Clerestory window leaves can be specified operable, but are typically fixed.
- Clerestory window leaves can include intricate, radial or tracery glazing patterns, either in individually shaped true-divided single or double panes, applied lead or genuine leaded light panes.
- Doors can be either inward or outward opening and wherever possible are specified to open through 180 degrees. *North American doors open outward as a standard to provide the opportunity for screen doors made either in timber or side-mounted recessed aluminum roll screen doors with a center latch.*

- Wall-frame arrangements can include generous width zones of uninterrupted outward-opening sliding/folding or folding/stacking doors. Support for sliding doors is off casters and tracking flush fitted within the frame head. Bottom guidance for the doors is with rods and tracking flush fitted within the threshold. Folding/stacking doors use hinges only.
- Opening window leaves can be either top or side-hung outward-opening. Top hung is standard and recommended.
- A generous window board (window sill), fitted internally, caps the builder's knee wall. *In North America, the mid-sill is frequently omitted to allow customization of interior knee wall details.*
- The wall-frame jambs can be specified to include enhancements: internal and external pilasters; corbels; stop-chamfered profiles.
- The wall frame can be specified to include a substantial profiled entablature (typical of orangery designs). The timber topside of the entablature can be dressed in lead, copper or aluminum (*generally preferred over Ice & Water Shield*).
- Instead of a knee wall, the wall-frames can be specified to include a substantial timber base, paneled on one or both sides and thermally insulated. Recessed panels are of weather resistant marine ply, recessed and with an applied molding. The wall-frames can be specified to include traditional counterbalanced box-sash window frames.
- Our rebated wall-frames are grooved to accept patent draught seals. Opening sashes are trimmed on all sides with anti-capillary grooves.
- *North American internal side frames features an optional chamfered post topped by a shelf and decorative pelmet that conceals custom made retractable insect screens in charcoal gray fiberglass.*

GLAZING

(a range of glazing specifications to suit individual circumstances)

Roof

- For roof glazing units less than 2400mm (8 ft) in length, the double-glazing units are comprised of two leaves of 4mm (3/16 inch) clear toughened (tempered) safety glass, a 16mm (5/8 inch) cavity, and include "softcoat" Low-emissivity heat reflective coating to the cavity face of the outer leaf (surface #2) as standard.
- For roof glazing units greater than 2400mm (8 ft) in length, the double-glazing units are comprised of two leaves of 6mm (1/4 inch) clear tempered glass, a 12mm (1/2 inch) cavity, and include "softcoat" Low-emissivity heat reflective coating to the cavity face of the inner leaf (surface #2).
- *Standard glass is argon-filled high-performance Low-E with winter (American) U-value of .26, Shading coefficient .46, Visible light transmittance 70%, UV transmittance 15%*

- Roof glazing units are rebated into a substantial ridge beam and secured by a two-part dry-glazed compression system – stainless steel screws securing an aluminum clip with internal gutter. Glass is seated in Thermo Plastic Elastomer compression gaskets reinforced to reduce stretching by polypropylene cord. This assembly is topped by a screw-less exterior cap. End seals are protected by an aluminum hanger clips secured to the roof plate with an interlocking support bracket. End caps feature a weep and condensate channel.
- End caps form a drip edge of varying lengths, depending on roof pitch (minimum 50mm-2inches) with the low-profile cap dying into the ogee profile gutter site line.
- *For North American snow zones we recommend commercial grade heating cables concealed within the gutter and downpipes with optional control systems, all by Owner.*

Side Frames

- For wall-frames, lantern side-frames and gables with true-divided panes, glazing units are retained with profiled beads internally fixed into 34mm (1-5/16inch) rebated glazing bars. They have sealed double-glazing units made in individually-shaped panes, comprising two leaves of either 3.2mm (1/8inch) or 4mm (3/16inch) clear toughened (*tempered*) High-Performance Low-E glass, a 10-12mm (3/8-1/2inch) cavity, and include the Low-E coating on the second surface. Insulated units are argon filled for added insulation.
Or
- For wall-frames, lantern side-frames and gables with simulated divided light rectangular glazing patterns, the glazing units are continuous between a 26mm (1-1/32 inch) flush hardwood glazing bar internally and corresponding 26mm applied aluminum glazing bars externally. They are secured in an enamel coated aluminum frame inset within the timber sash with integrated weep channels. This makes them particularly suitable for high-stress (growing or humid) locations. Frames have sealed double-glazing units comprised of two leaves of 3.2 or 4mm clear toughened (*tempered*) safety glass, a 10- 12mm cavity, and include Low-emissivity heat reflective coating on the second surface.
Or
- Wall-frames and lantern side-frames are single-glazed in individually shaped panes of 4mm clear toughened safety glass, retained with profiled beads internally fixed into 22mm (7/8inch) rebated glazing bars.
Or
- Genuine formed single-glazed leaded light panes, or applied pattern leaded double-glazed panes are also available. The latter are formed by applying the lead to the inside and outside surface of the outer leaf of glass, creating the appearance of authentic lead while preserving the use of insulated glazing units.
- Tints and special glazing options are available upon request.
- *North American projects are supplied with U.S. made glass. Options are extensive, including tempered-laminated glass and impact-resistant glass.*

FINISHES AND PREPARATIONS

- All timber roof and wall frame components are spray shop prepared to undercoat finish (*two coats*) using acrylic based finishes, oil-based by request. Door thresholds are normally painted for North American projects.
- Glazed roof exteriors are fully pre-finished (in the workshops) externally. The roof double-glazing units are secured with aluminum cappings pre-finished in two-pack spray urethane enamel finish.
- Ogee-pattern cornice gutters are pre-finished in two-pack spray urethane enamel finish.
- Aluminum Parapet/box gutters are pre-finished in two-pack spray urethane enamel finish. *North American parapet/box gutters are typically copper, aluminum or membrane by Owner.*
- The exterior finish color (roof cappings, gutters and metalwork) may be chosen from our palette of 27 standard colors or from an additional range of 1000 custom colors. *Finish coat of interior and exterior side walls and interior roof is by Owner and is recommended after completion of site work, but within 2 weeks.*
- Valley flashings are in lead or aluminum (painted) to match the roof cappings and gutters.
- *Copper or lead work for North American projects is supplied by the Owner.*

IRONMONGERY (BRASSWARE)

Standard options include cast polished brass, de-lacquered brass, chrome, satin chrome plate, bronze or nickel colored finish.

Pairs of doors are fitted with:

- 3-4 pairs of 4 inch tall projection hinges
- 2 pairs of handles or knobs
- 5-point multi-point lockset (concealed bolt) for French door sets, 3-point for single doors
- Surface mounted slide bolts, when no multi-point lockset
- 2No. cabin hooks with eyes
- *Or*
- Surface mounted espagnolettes to order.

Top hung opening windows are fitted with:

- 1No. casement stay and pins. (*2 each for opening sashes exceeding 700mm; 28inches*)

ENGINEERING

- Each project is manufactured per structural engineering calculations to local code requirements. *In North America, stamped and sealed engineering calculations are available for all states and Canada.*

DELIVERY AND INSTALLATION

- All Town & Country buildings in the UK and US are delivered and installed by experienced Town & Country installers. Subcontractor installations are not authorized.

DRAWINGS

- All Town & Country contracts include the preparation of workshop production (shop) drawings and include attaching details and dimensions, base or knee wall setting out dimensions and flooring/threshold details for the Owner's contractor. Frame opening dimensions and door locations are also provided.

OTHER OPTIONS

- A range of cordless roof blinds are available including electric or manual operation in a variety of colors and fabrics Extended window boards can form window seats or radiator grills, either open or paneled with matching joinery.