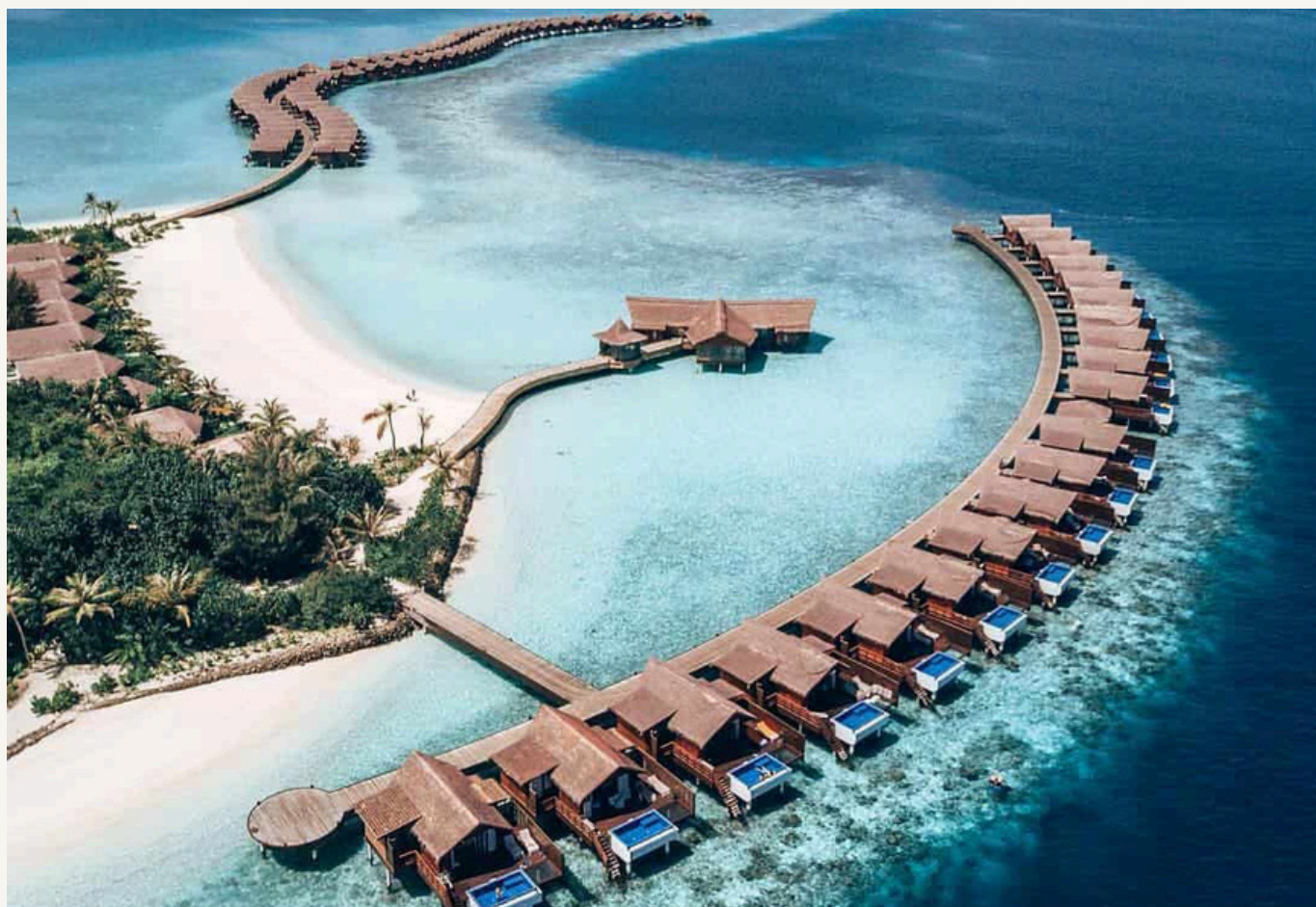


REVO

ASSEMBLY METHODOLOGY

Exceptional building system for a challenging world.



THE BUILDING INNOVATION BY THE T&B GROUP

A practical guide to the REVO building system.

BENEFITS OF BUILDING WITH REVO

A pre-manufactured system designed to makes it easy assembly clear, efficient and adaptable.

REVO combines accurately machined timber components with construction drawings prepared for assembly on site. Standard designs can be adapted for larger developments, with T&B; Group able to design, manufacture and deliver projects to an agreed brief and budget.

PREPARED FOR SITE

- Components are CNC-manufactured to size and labelled to the construction drawings.
- No cutting or trimming is required to the primary system.
- Plate and bracket connections are CNC-rebated for their connection points.
- Installation requires limited skills and basic tools.
- Complete construction drawings are supplied.
- Timber is sourced from FSC-accredited plantations.
- Brackets and fixings are corrosion-resistant.

FLEXIBLE BY DESIGN

- Layouts can be custom-designed or modified to suit project requirements.
- The system can be installed on a concrete base or an elevated timber base.
- Pre-glazed aluminium windows and doors, or other specifications, can be supplied.
- Timber components are treated against fungal and insect attack.
- The system can be dismantled and reinstalled elsewhere, with near 100% recovery of components.
- Internal and external over-cladding can be varied to change the finish.
- Roof structure, style, covering and eaves can be designed to suit the project.

For larger commercial projects, the REVO system can take advantage of repeatable components and economies of scale.

FOUNDATIONS AND FLOOR SYSTEMS

TYPICAL PAD AND TIMBER PILE FOUNDATIONS



Pad foundations can be built on a conventional surface bed or raft slab.



Marine-treated timber piles may be used for jetting into the seabed, subject to site conditions and engineering design.

Floor structures can also be adapted to sit over conventional concrete beams used as the primary substructure.

CONVENTIONAL BEARER AND JOIST FLOOR STRUCTURE



Components are pre-cut to size and shape, then tagged to match the construction drawings.



Connections use hot-dip galvanised or stainless-steel fixings. Bearer and joist sizes can be increased to suit site conditions.

The lightweight timber floor structure is designed for straightforward identification and installation on site.

FLOOR STRUCTURE

MOISTURE BARRIER AND SUB-BASE

The sub-floor build-up can be specified to suit the project and site conditions.



Sub-floor includes a moisture barrier and a ply or OSB sub-base.



Clout nails secure the moisture barrier to the floor structure.

Additional insulation panels can be installed between the floor joists from below.

TREATED SUB-FLOOR



Treated plywood sub-floor, prepared as part of the supplied structure.



Timber treatment is selected for the intended application, from H3 to H6.

The original specification states that structures are supplied with a treated 18 mm plywood sub-floor.

CNC ACCURACY AND ASSEMBLY

CNC ACCURACY

Factory-prepared connections help the components locate accurately during assembly.



CNC-formed connection points receive the specified brackets.



Corner-post installation follows the same post-and-rail connection principle.

Only a cordless drill is required for the assembly shown in the factory demonstration.

BASE PLATE WITH WEATHER GUARD



Pre-formed plate with a weather drip at the front edge.



The same detail can be used with timber floor structures and wet-area bases.



Base plates are cut to fit between columns.

Factory demonstration photographs.

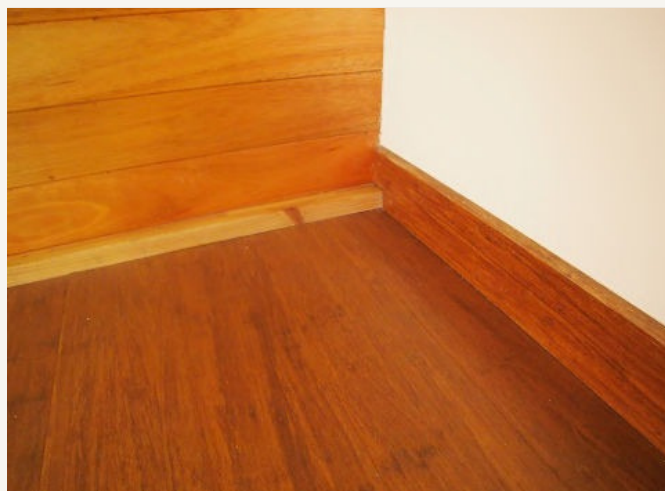
BASE PLATE AND RING BEAM

BASE PLATE STRUCTURE

The primary timber connections use pre-formed rebates and consistent screw fixings.



Inner edge is recessed to allow a concealed flooring edge.



The rebate can be adjusted for floor thickness and application, helping create a flush floor and skirting finish.

RING BEAM



Ring beam is CNC-manufactured with fixing rebates and mitres pre-cut.



Top-of-ring-beam connection. Screw fixings for the primary system follow the same specification.

Factory demonstration photographs.

COMPLETE POST AND RAIL STRUCTURE

The post-and-rail frame receives pre-manufactured wall panels.



WALL PANELS

- Standard REVO wall height is 2.5 m.
- Panels are made in 300 mm increments up to 1.2 m wide.
- Two 1.2 m panels can form a 2.4 m panel. Wider openings can be divided by intermediate columns.
- Laminated beams can be specified above larger openings for glazed sections or sliding doors.



Panels are CNC-sized to fit the post-and-rail system. Openings can take aluminium or timber shopfronts.



Pre-drilled fixing holes support accurate installation. Each full panel can be handled by two people with a cordless drill.

Wall widths and openings are set for each project. Confirm final dimensions against the project construction drawings.

TYPICAL PANEL MAKE-UP

The component dimensions below are transcribed from the supplied REVO methodology.



RINGBEAM

114 x 114mm profiled timber, fixed to wall columns with 125 x 125 x 2mm, 22 mm-wide L-brackets and 40 mm Pozi-drive screws.

WALL PANEL

Standard wall height is 2,500 mm. A height up to 3,000 mm is available on request. The frame uses treated 50 x 50 mm intermediate and outer studs. Exterior cladding is 13 x 102 mm SA Pine tongue-and-groove, treated for the exterior and fixed and glued to the frame. The inner face uses 6 mm Okoume board, with 50 mm Lamdaboard polyisocyanurate insulation as the core.

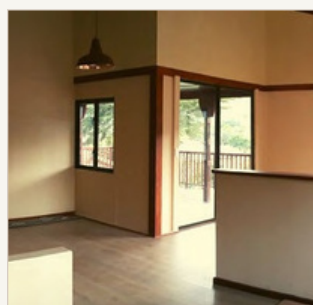
BASE PLATE

A 70 x 152 mm moulded base plate is fixed to wall columns with 125 x 125 x 2 mm, 22 mm-wide L-brackets and 40 mm Pozi-drive screws. The plate is fixed to the panel with 8 x 100 mm Pozi-drive screws. SikaFlex strips are placed at the sides of the frame before connection.

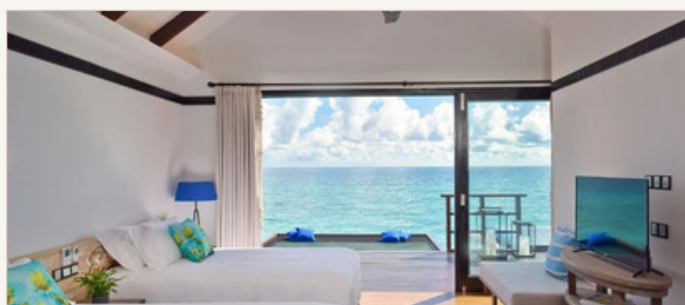
INTERNAL OVER-CLADDING WITH GYPSUM BOARD



Panel build-up detail.



Optional interior finish.



Finished interior example.

For a flush plasterboard finish, battens and gypsum board can be added to the inner face. This can add insulation and provide space to conceal services.

ALTERNATIVE WALL PANELS AND CLADDING

ALTERNATIVE WALL PANEL MAKE-UP

Panels can be supplied with 6 mm interior and exterior plywood. The panels and upright columns are adjusted to create a flush external finish, ready for the selected over-cladding.



Flush-finished panel example.



Panels installed on a coastal project.

EXTERNAL FIBRE-CEMENT OVER-CLADDING



Pre-manufactured panels beneath the exterior finish.



Completed external cladding example.

On the example shown, T&B; supplied pre-manufactured panels with a 6 mm Okoume plywood flush exterior. The client chose fibre-cement board as the over-cladding.

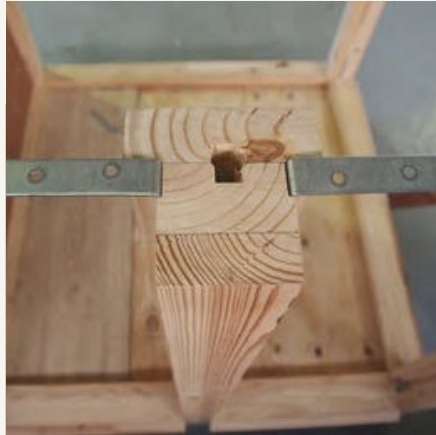
ELECTRICAL AND SERVICE INSTALLATION

ELECTRICAL INSTALLATION IN THE WALL SYSTEM

Service routes are planned into the panel system wherever possible.



Pre-drilled conduit passes through intermediate columns.



Switch and plug cut-outs are milled to suit the selected boxes.



Other electrical and plumbing routes can run through internal timber partitions.

Circuit holes and service cut-outs are CNC-prepared at the specified heights and locations. A pre-drilled route through the ring beam aligns with the column conduit for wire reticulation.

RETRO-FITTING OTHER SERVICES



Some service connections, including those serving sanitary ware, are completed on site.



Electrical connections, water supply and wastewater can be installed through the timber frame walls.

Coordinate final service locations with the project drawings and relevant trade teams.

FITTING, FINISHING AND ROOF STRUCTURES

MINIMAL FITTING AND FINISHING ON SITE



Internal doors are supplied pre-hung in their frames.



Windows are supplied pre-installed in the panels. Items are bundled, wrapped, strapped or crated for shipping and handling.

ROOF STRUCTURES



Roof rafters can be pre-cut with birdsmouths, ridge-beam slope cuts, eaves and other design details.



CLADDING AND INTERIOR FINISH OPTIONS

EXTERNAL CLADDING

A range of finishes can be selected to suit the design and setting.



Hardwood cladding. Various options available.



Pine tongue-and-groove cladding, horizontal.

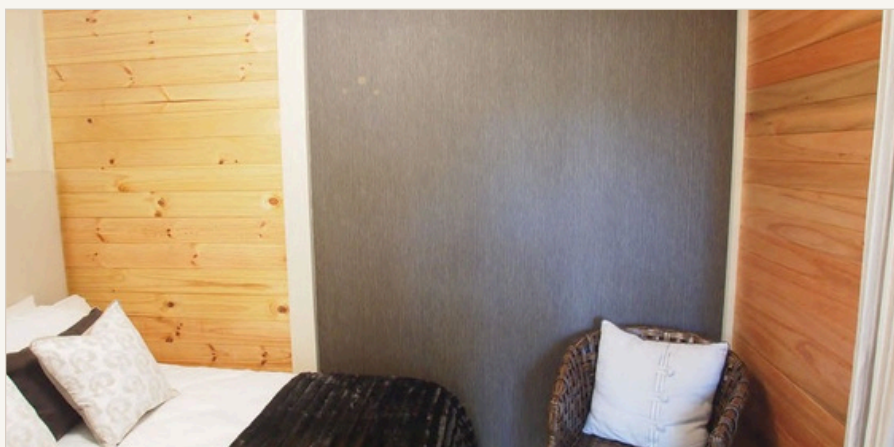


Pine tongue-and-groove cladding, vertical.

INTERIOR FINISHES



Tiled bathroom example.



Interior surfaces can be painted, varnished or wallpapered.

These examples show a selection of the finishes used on REVO projects.

EXPERTISE YOU CAN TRUST

THE T&B GROUP

Based in Knysna, T&B Group was founded in 1985 and makes quality log and timber homes for the local and export markets. The business grew from the area's timber industry and built a national and international reputation for craftsmanship.

The group specialises in solid log homes, commercial timber buildings and resort developments. REVO Homes is its patented pre-manufactured building system.

IN-HOUSE SKILLS

- Sales and marketing
 - Manufacturing
 - Prepared construction off site
 - Full project logistics
 - Architectural design and draughting
 - Engineering
 - Construction
 - Sourcing and procurement
 - Finance and administration
 - Transport
-

WHERE COULD REVO WORK?

FOR DEVELOPMENTS

- Resort developments
- Contract housing
- Remote developments
- Commercial developments
- Residential developments
- Educational institutions

FOR HOMES AND EVERYDAY USE

- First homes
- Second or holiday homes
- Home offices
- Second dwellings or granny flats
- Additional storage
- Hobby rooms and workshops
- Garden sheds

REVO PROJECTS

A selection of resort, lodge and hospitality projects.



Aga Reef Resort, Samoa



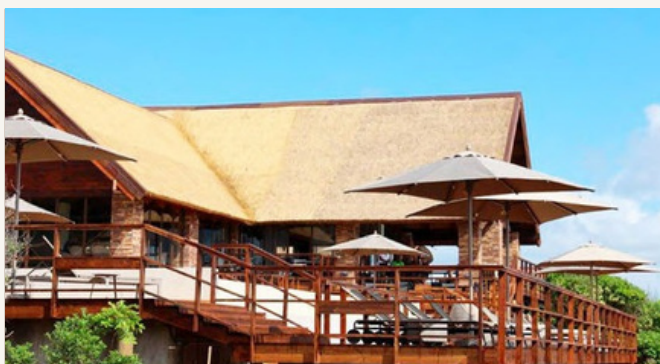
Grand Park Kodhipparu, Maldives



Hilton Amingiri, Maldives



Matemo Island, Mozambique



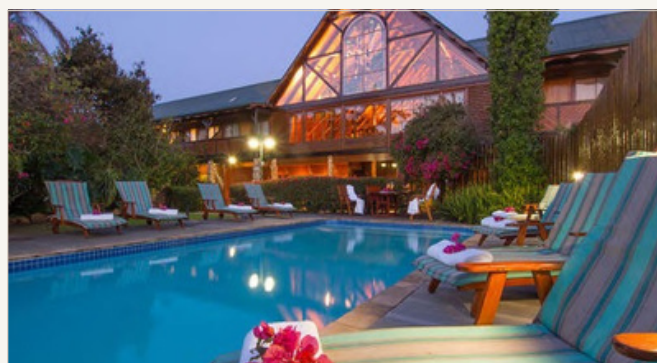
Milibangalala Bay Resort, Mozambique



Nyungwe Forest Lodge, Rwanda



Mussulo Lodge, Angola



Log-Inn Hotel, Knysna