

AN ILLUSTRATED
GLOSSARY OF
WOODEN
ARCHITECTURE



OXFORD
BROOKES
UNIVERSITY



ARCADIA



AN ILLUSTRATED GLOSSARY OF WOODEN ARCHITECTURE

produced for the

ENDANGERED WOODEN ARCHITECTURE PROGRAMME

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INTRODUCTION

This glossary has been produced to support the documentation processes of the Endangered Wooden Architecture Programme. The Endangered Wooden Architecture Programme is a grant-giving programme that offers small and large grants for the documentation of endangered wooden architecture. The programme is hosted by Oxford Brookes University and delivered in collaboration with CyArk. EWAP was established in 2021 with funding from Arcadia, a charitable fund of Lisbet Rausing and Peter Baldwin.

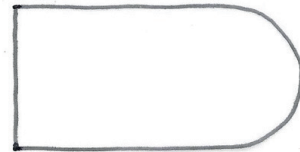
Wooden architecture has a strong legacy not only as an architectural product, but also through the building practices and techniques, alongside the rituals that accompany their construction. Wooden buildings are thus also integrally linked to language through the terms associated with their various components, joints, fixings, decorative features and construction systems. Far from being universal, these terms often have very specific local usages, including in indigenous and endangered languages.

The purpose of the glossary is to establish the English language terms used for the various primary components of wooden architecture to support key word searches in online databases and to maintain a referencing consistency across the different structures being recorded. Those recording the wooden architecture are encouraged to use the native language names for the components when labelling drawings, including any specific local terms.

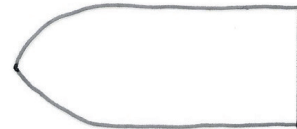
The glossary includes the most commonly used terms related to wooden architecture, but we are aware that there are many more. The definitions cited here have been compiled from a range of sources that are listed in the bibliography. These will also be useful sources of reference for additional terms and clarifications.

FOOTPRINTS

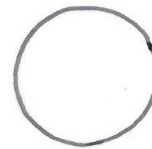
Apsidal - A rectangular shape with one of its sides being hemispherical



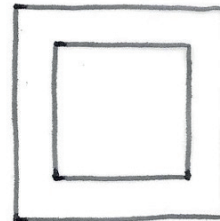
Boat - Any form of vessel that floats, including houseboats



Circular - A round-shaped that has no corners or edges

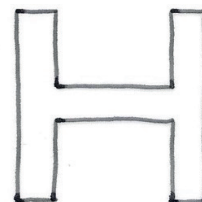


Courtyard - A building incorporating a level open space, usually quadrilateral, and surrounded by buildings, walls or both

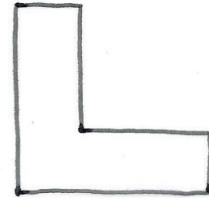


Hall - i) A building with a main reception room, often leading off the access; ii) a large meeting room that may be aisled

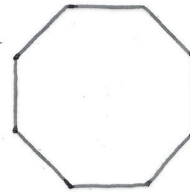
H-shape - Building with a plan shaped like a letter H



L-shape - Building with a plan shaped like a letter L



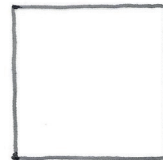
Octagonal - A geometric shape with eight angles and eight sides



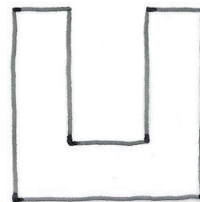
Rectangular - A four-sided shape with straight sides where all interior angles are right angles (90°) and opposite sides are parallel and of equal length.



Square - A shape with four equal sides and four right (90°) angles



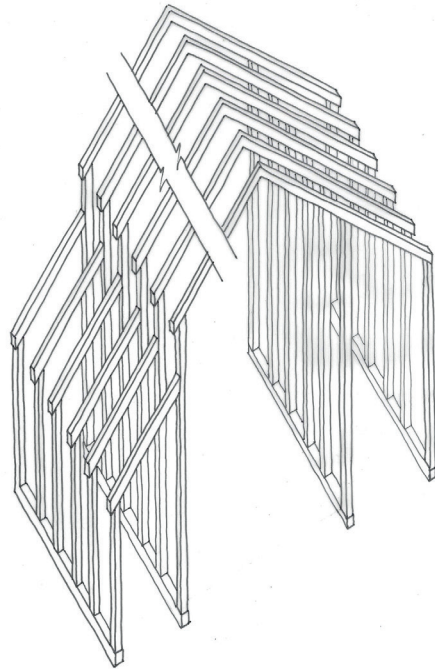
U-shape - Building with a plan shaped like a letter U



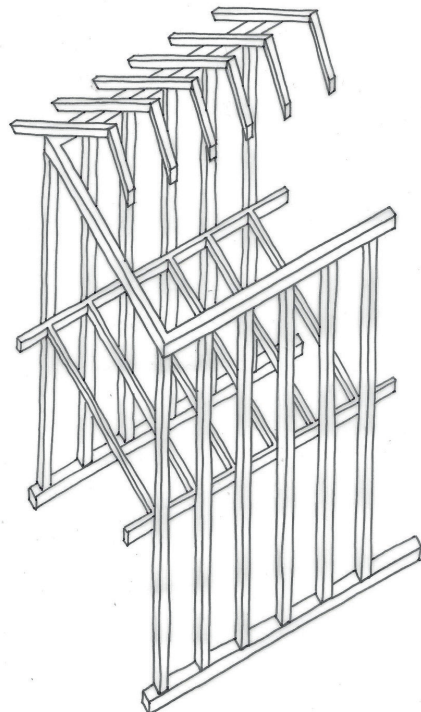
2

STRUCTURAL SYSTEMS

Aisled frame - aisled frames have one or more rows of interior posts. These interior posts typically carry more structural load than the posts in the exterior walls.

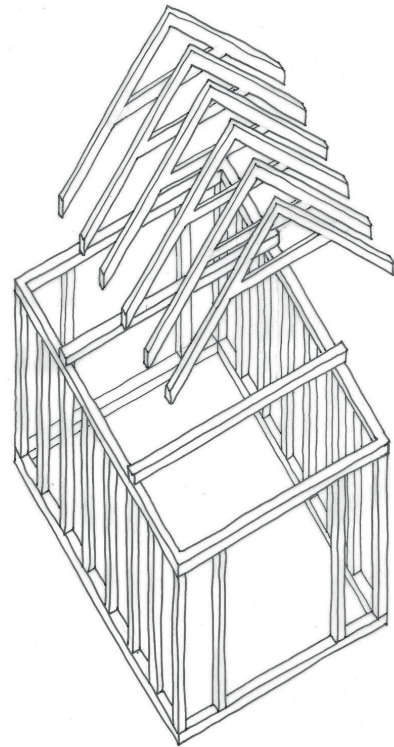


Balloon frame - large posts that are the full height of the frame and into which the horizontal members are fixed with interlocking joints. Also referred to as brace frame.

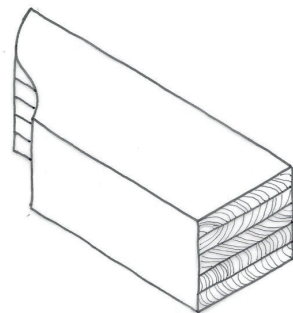


Bridge - a spanning structure that creates a passage over an obstacle such as a river, gorge, valley, road, railway or similar.

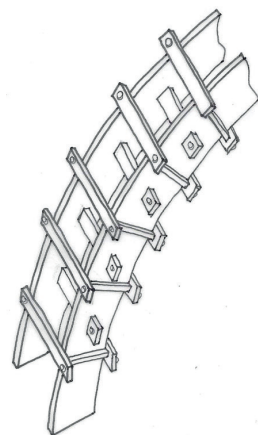
Box frame - a load bearing timber frame where the assembly of horizontal and vertical timbers forms a skeleton (box) that supports the roof that sits on top of it.



Laminated timber - structural timber manufactured from small pieces of timber that are jointed and laminated. Glue lamination developed in the 20th century, is also referred to as 'glulam'.



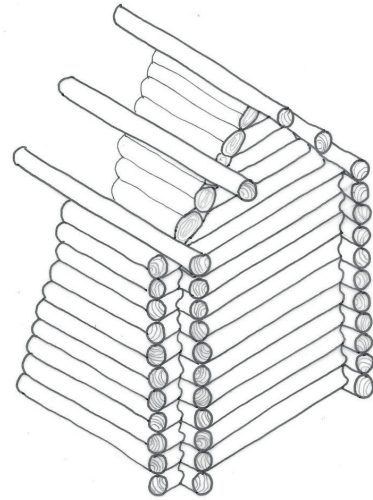
Glue laminated timber



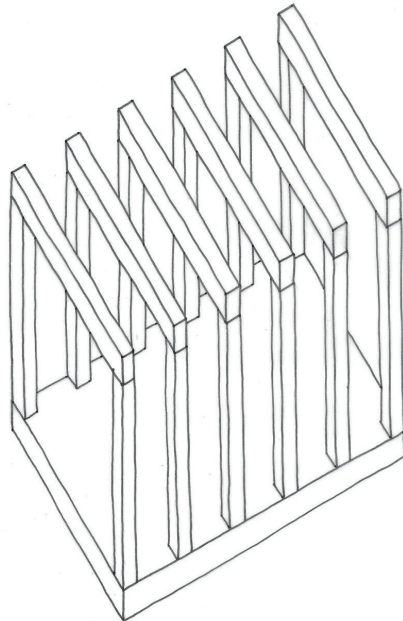
Laminated arch

2 STRUCTURAL SYSTEMS

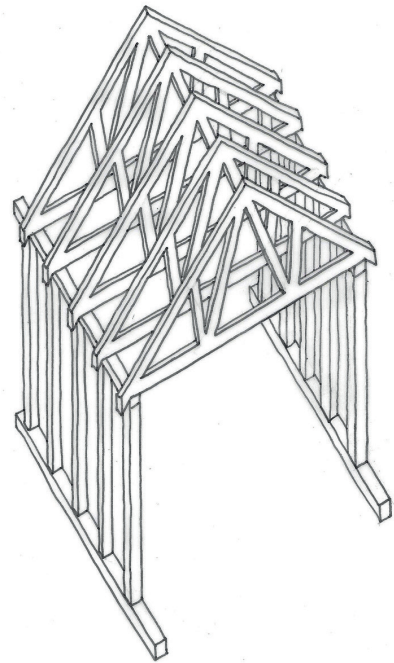
Log construction - A building constructed from whole tree trunks (logs) which also forms its structural system



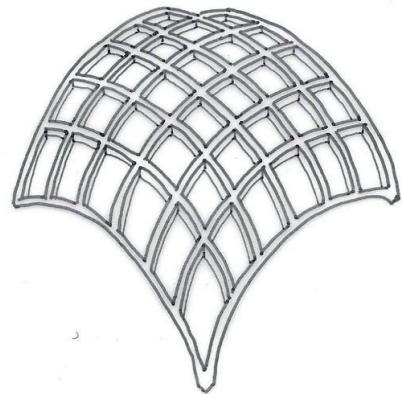
Post and beam - construction or frame where the vertical posts are the height of each storey and support a horizontal beam



Post and truss - the roof truss is an integral part of the structural system



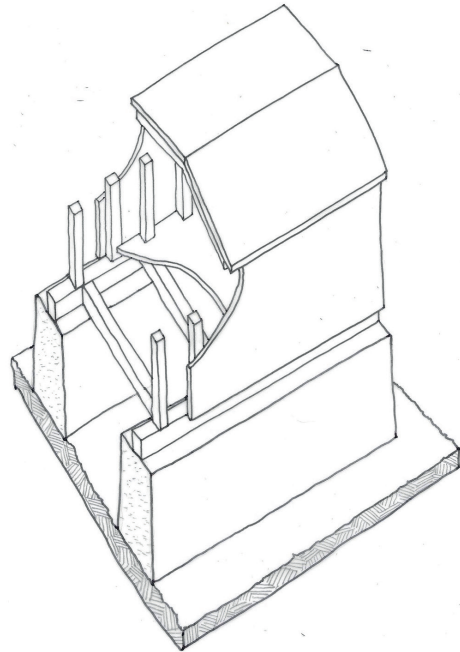
Shell - a rigid curved structure formed by a structural lattice of pre-formed timber components



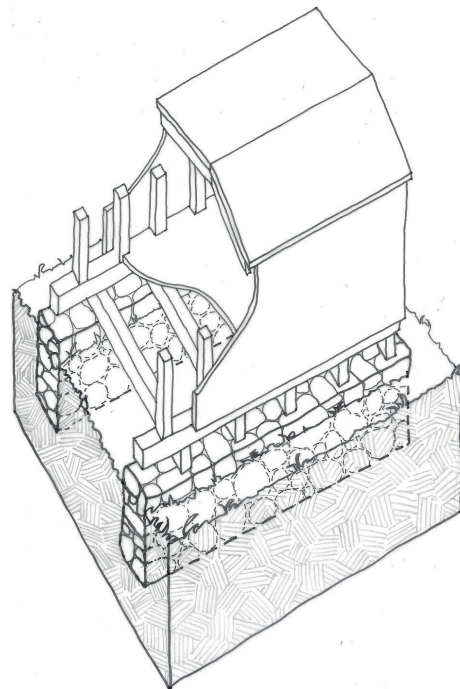
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STRUCTURAL BASES

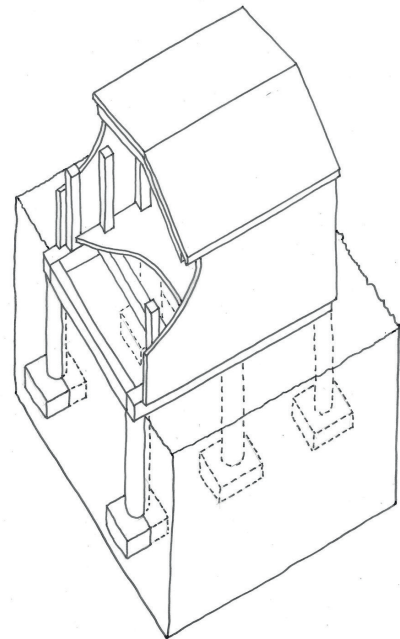
Earthen wall base - the wooden structural system of the building sits on a base made of rammed earth or earth bricks



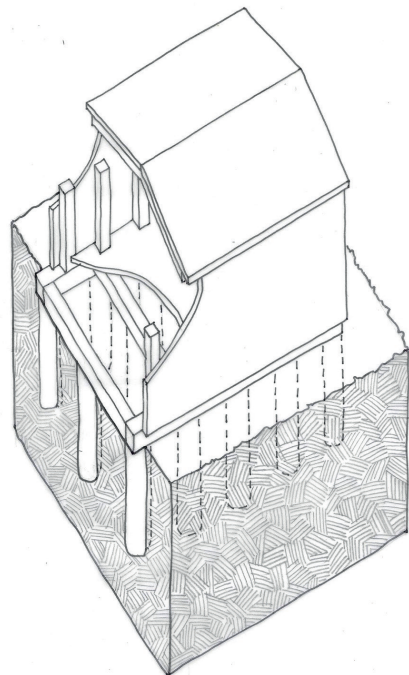
Masonry base - the wooden structural system of the building sits on a masonry wall or columns made of stone, brick or concrete



Stone pads - the posts that are part of the wooden structural system of the building are placed on stone pads



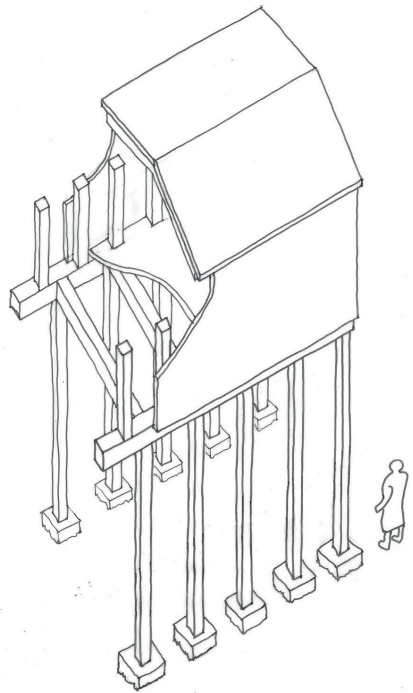
Wooden piles - wooden piles driven into the ground to support the structure



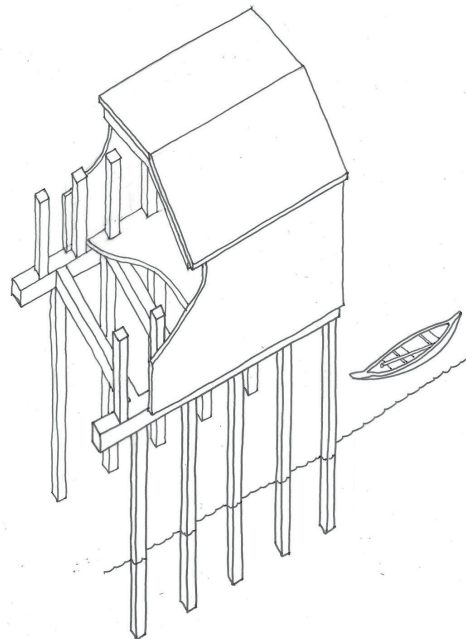
Wooden post directly in earth - the posts that are part of the wooden structural system of the building are placed directly in the earth and act as a foundation

3 STRUCTURAL BASES

Wooden stilts on land - the main building is elevated from the ground with wooden posts (stilts)



Wooden stilts on water - the main building is elevated over water with wooden posts (stilts)



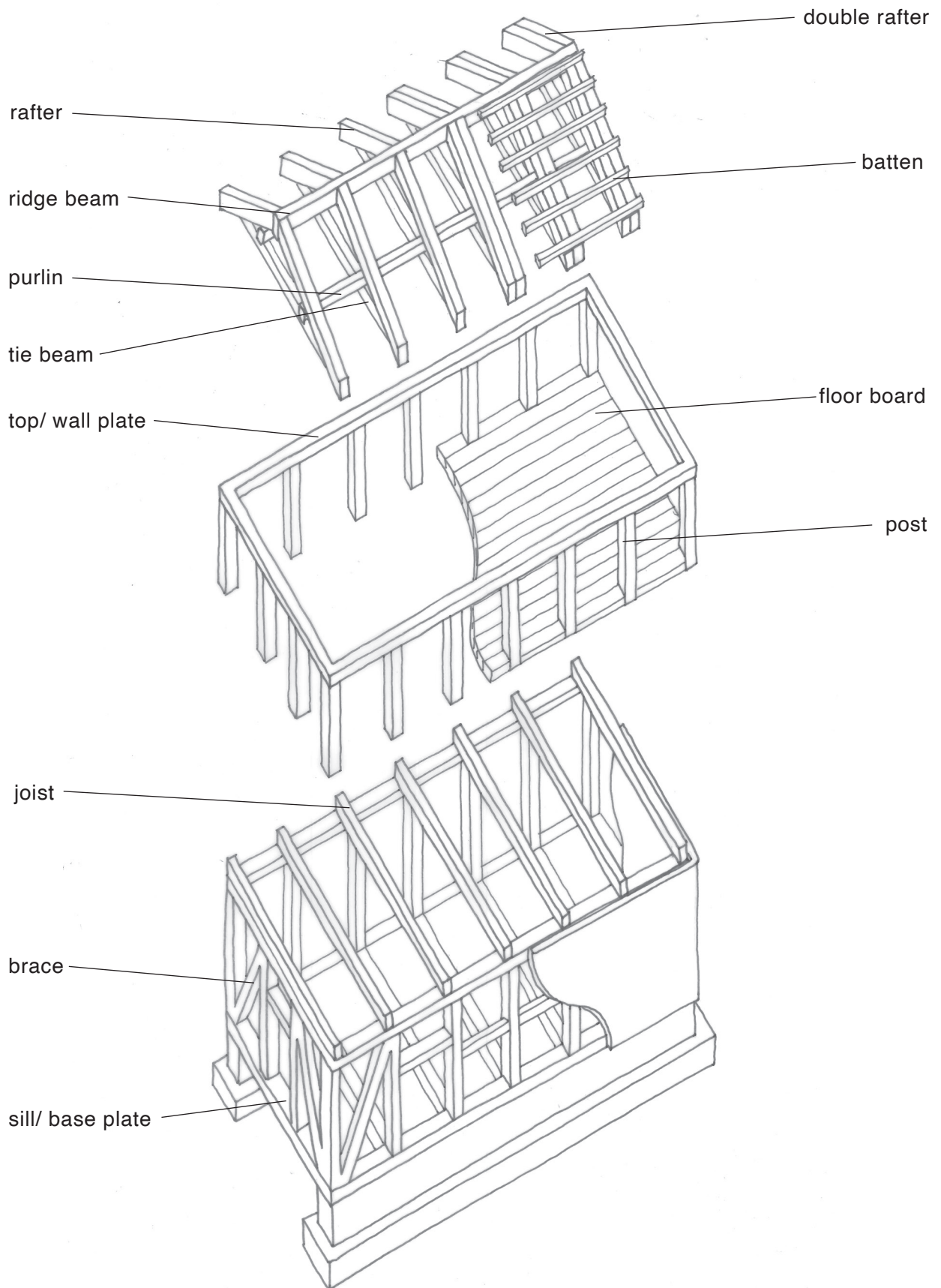
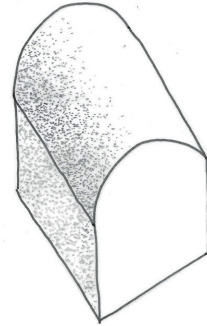


Figure A

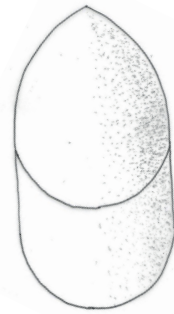
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ROOF FORMS

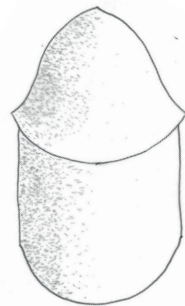
Barrel roof - a roof in the form of a half cylinder.



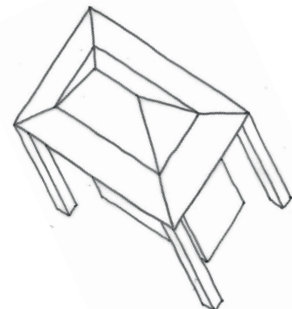
Beehive roof - a loosely used term to describe the similarity of the profile of some single-cell dwellings to the form of a straw beehive (a dome of coiled straw rope)



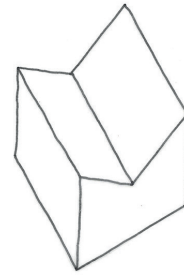
Bell roof - a roof form resembling the shape of a bell. Bell roofs may be round, multi-sided or square



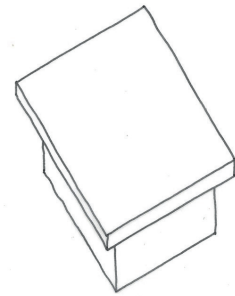
Bonnet roof - a double slope on all four of its sides with the lower slope being less steep and more angular than the upper slope



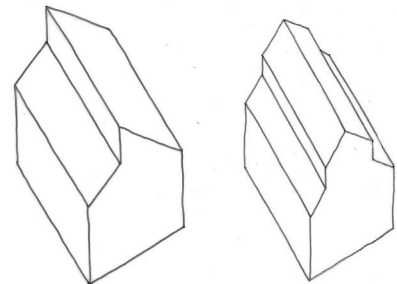
Butterfly roof - A Y-form roof, where two sloping planes rise outwards and upwards from a central gutter



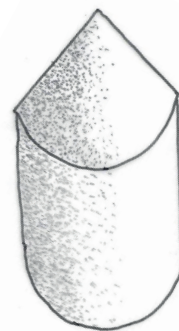
Cantilevered - a roof where the main body of the truss, not just the rafter overhang, projects beyond the vertical support.



Clerestorey - sloping roof panels at slightly differing heights, which are joined in the middle by a vertical flat wall

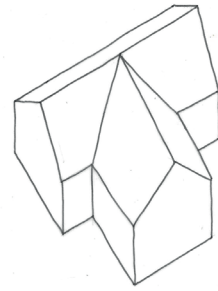


Conical - a roof shape that is circular on plan and rises to terminate in a point, the whole forming a regular cone in shape

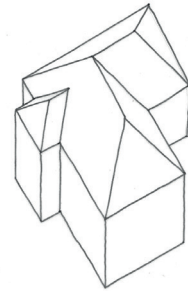


4 ROOF FORMS

Cross gable - roof with two or more gable rooflines that intersect at an angle, most often with the two ridges placed perpendicular to one another



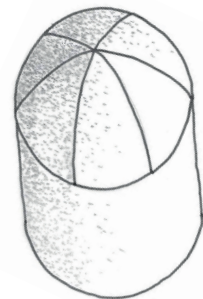
Cross hipped - two or more hip roof sections join in the shape of a cross, a 'T', or an 'L'.



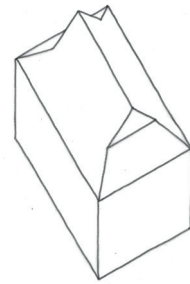
Cross roof - A pitched hip and valley roof for a building which is cross-shaped in plan, with four valleys and four gabled or hipped ends



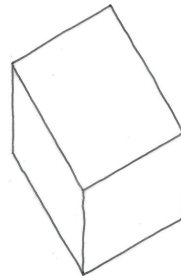
Domed - A roof in the form of a dome



Dutch gable - a roof with a small gable at the top of a hip roof



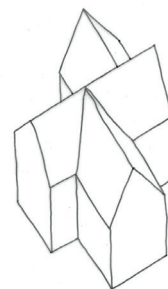
Flat roof - a roof that is completely, or almost level



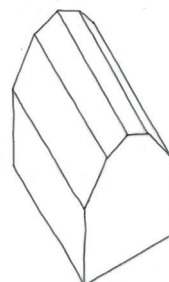
Gable - a roof consisting of two sections whose upper horizontal edges meet to form its ridge. Also referred to as Pitched.



Gable and valley - intersecting gable roofs



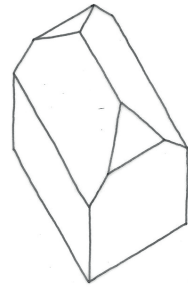
Gambrel - a two-sided roof with two slopes on each side



Gazebo - see Hexagonal

4 ROOF FORMS

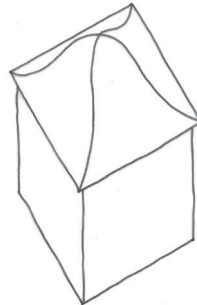
Half hipped - a variant of the hipped roof, where the trapezoidal sloping roof plane at one or both ends is capped by a gable or gablet. Also referred to as Jerkinhead.



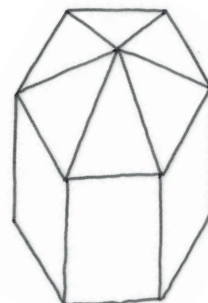
Helm - a pyramidal roof with each plane rising from a gable, mainly used for towers



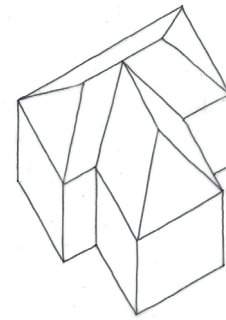
Helmet - a pitched or domed roof with an ogee (four-centred arch) at the top. Named for its resemblance to a helmet there are a number of variations around the world.



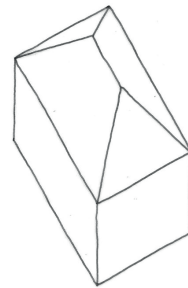
Hexagonal - a roof formed of six triangular identically pitched roof panels and six supporting rafters, also referred to as Gazebo.



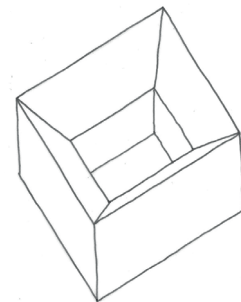
Hip and valley - a pitched roof constructed with both hips and valleys



Hipped roof - a roof that slopes upward from all sides of a structure, having no vertical ends. The hip is the external angle at which adjacent sloping sides of a roof meet.

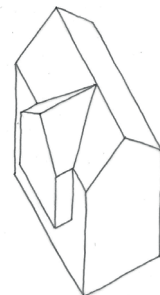


Impluvial - a square opening in the roof where the roof slopes into the centre of an atrium



Jerkinhead - see Half-hipped

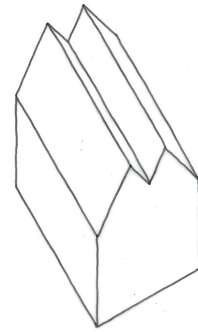
Jettied - where the upper floor protrudes beyond the walls of the first story



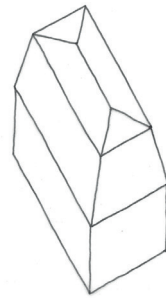
Lean-to - see Sloped roof

4 ROOF FORMS

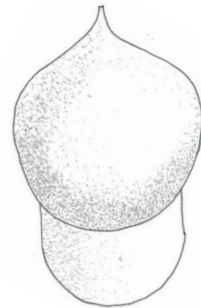
M shaped - a roof formed by the junction of two simple pitched roofs with a valley inbetween



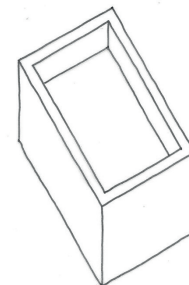
Mansard - A hipped roof in which all four roof surfaces are doubly pitched



Onion dome - a dome that is often larger in diameter than the tholobate upon which they sit, and their height usually exceeds their width. These bulbous structures taper smoothly to a point

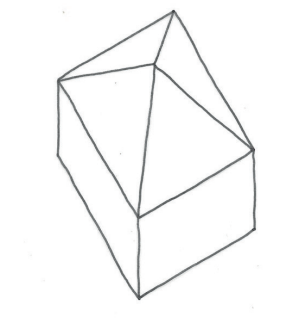


Parapet - a flat roof with the walls of the building extending upwards past the roof by a few feet around the edges

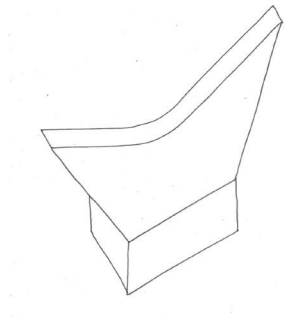


Pitched - see Gable

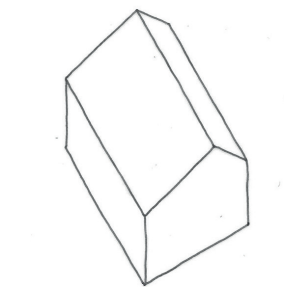
Pyramidal - four equal triangular sides which meet at a singular point at the top of the roof



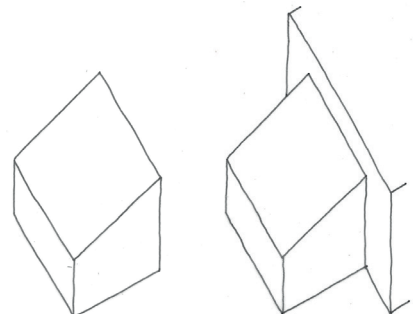
Saddleback - a roof with a concave ridge



Saltbox - a gable roof with asymmetrical planes, one long and one short side



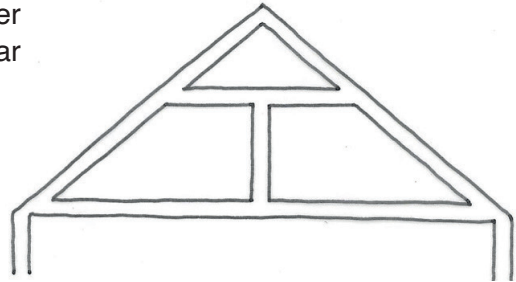
Sloped roof - a roof with a single slope. Also referred to as Lean-to if its upper edge is abutting a wall or a building



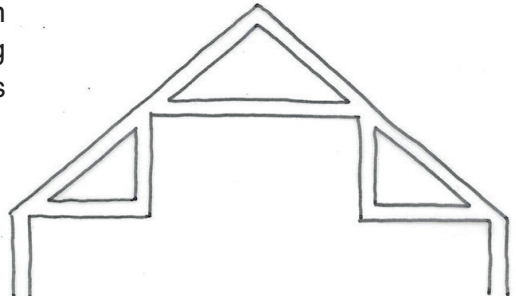
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ROOF SYSTEMS

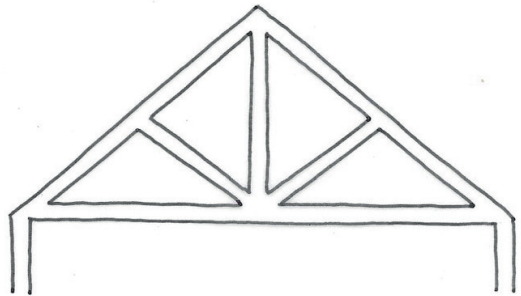
Crown post roof truss - a truss with a vertical member between the tie beam and collar beam supporting a collar purlin.



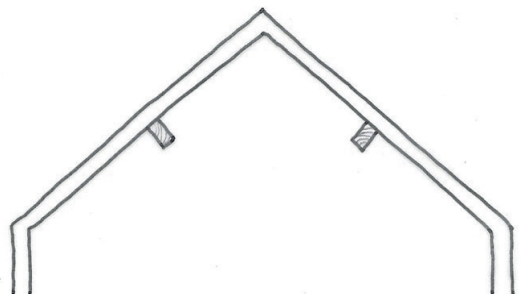
Hammer beam - a horizontal bracket supported on curved braces and with a hammer post extending vertically to the principal rafter and collar; positioned as a pair.



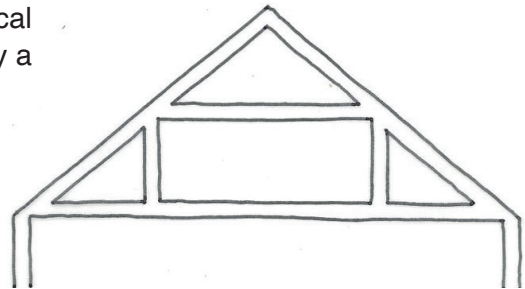
King post roof truss - a truss with an upright (vertical) member placed at the centre of the tie beam and used to support the ridge piece.



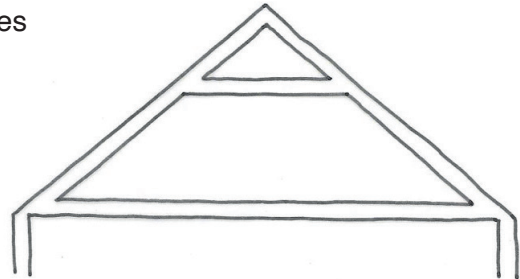
Purlin roof - a roof where the rafters are supported by horizontal purlins.



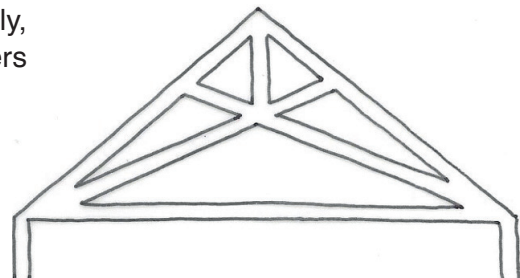
Queen post roof truss - a truss with a pair of vertical posts placed vertically on a tie beam and separated by a straining beam.



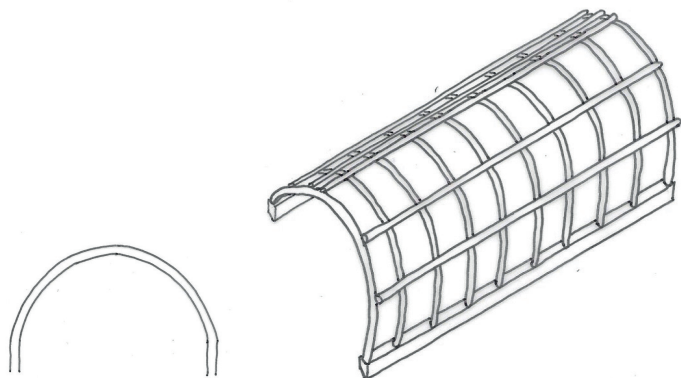
Rafter roof - a roof with rafters extending from the eaves to the ridge with no purlins; may be tied with collars.



Scissor braced - a pair of braces crossing diagonally, halved or lapped over one another, to tie a pair of rafters together



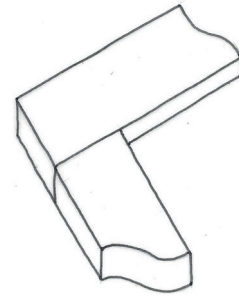
Wagon - barrel shaped structure.



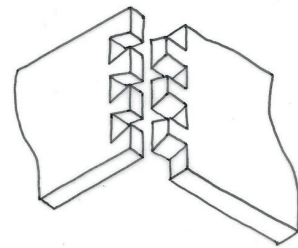
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JOINTS

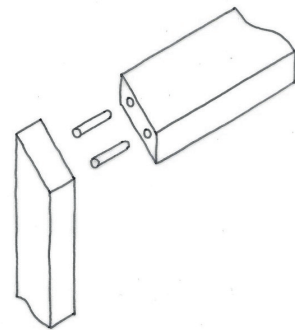
Butt joint - a joint in which two pieces of wood are laid against each other, with no real interlocking.



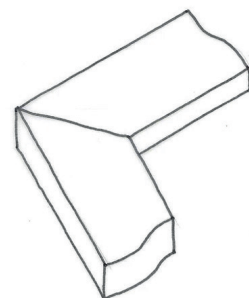
Butt dove tail - a joint formed of a wedge shape cut into one piece of timber designed to fit into a similarly shaped recess in another.



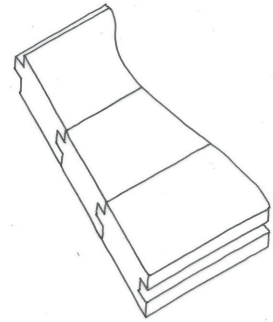
Butt dowel - a joint formed by a headless peg or pin in wood or another material used to fasten the two components.



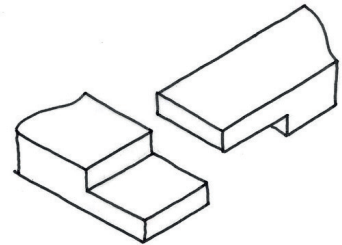
Butt mitre - a joint formed by two components at right angles involving chamfers or mouldings meeting at a diagonal line.



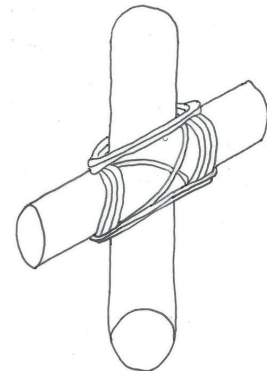
Edge to edge - a joint in which two components are joint edge to edge. Also referred to as **tongue-and-groove**. These joints are not stable and are typically nailed for support, though nails may not be visible.



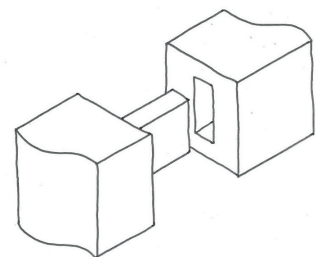
Half lap - a joint in which opposing elements are 'halved' to permit a secure fixing by overlapping



Lashed or tied joint - joints in which pieces of wood are fastened using cords, strings or ropes

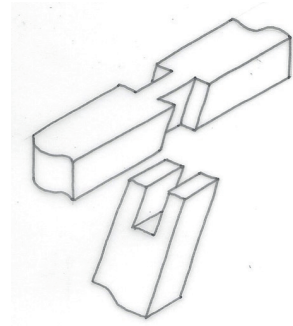


Mortise and tenon - a joint in which a pre-cut tongue or projection at the end of a timber component is inserted into a slot or mortise.

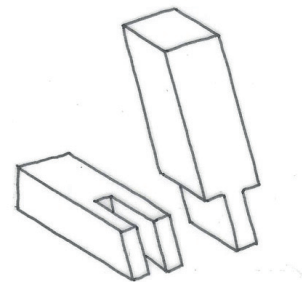


6 JOINTS

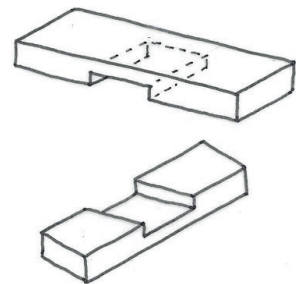
Oblique joints - joints that are neither parallel nor at a right angle to a specified or implied line



Oblique bridle - similar to a mortise and tenon joint, except with a that tenon is cut on the end of one member and a mortise is cut into the other to accept it. In this example on an oblique.



Oblique half lap - a half lap joint cut on the oblique.



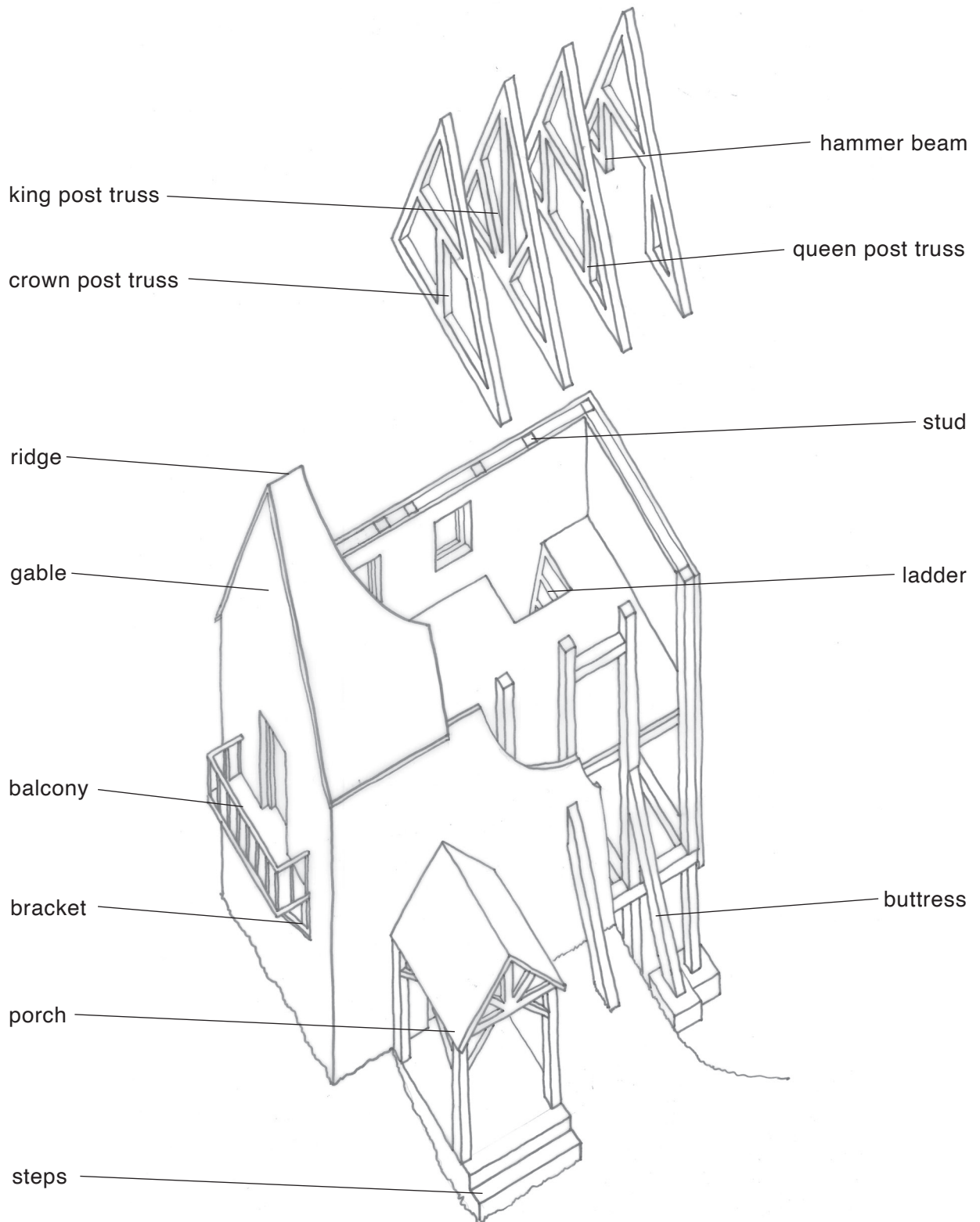
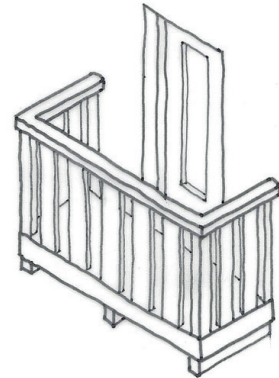


Figure B

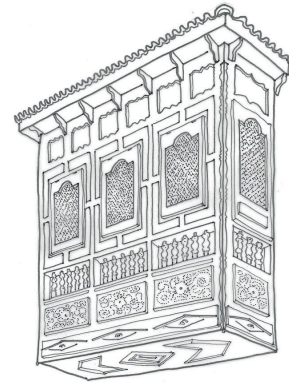
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FEATURES

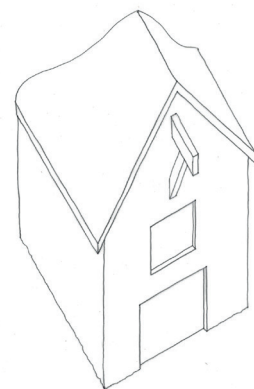
Balcony - a platform projecting from a wall, supported by consoles or brackets.



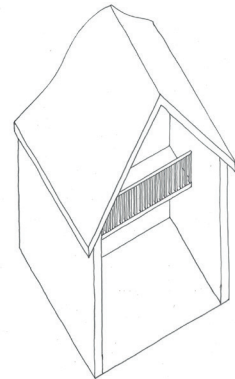
Covered balcony - a balcony that is enclosed with ironwork, wooden trellises and panels or glazing.



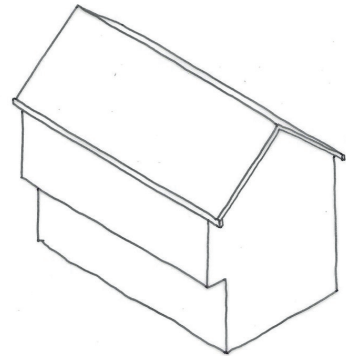
Gable hoist - a hoist (with a pulley and rope) attached to the gable.



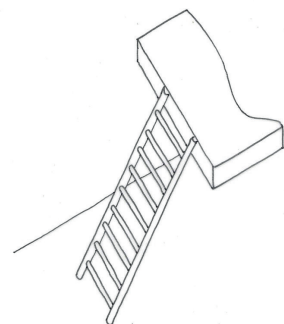
Gallery - an upper storey open on one side to the building's interior or exterior.



Jetty - an upper storey that overhangs the storey below, its wall frame carried on projecting and cantilevered floor joists.

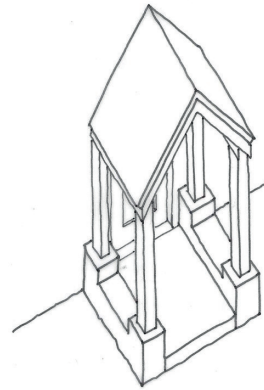


Ladder - a structure consisting of a series of bars or steps between two upright lengths of wood, metal, or rope, used for climbing up or down something.

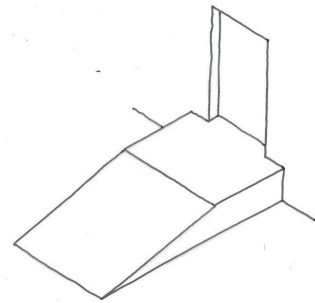


7 FEATURES

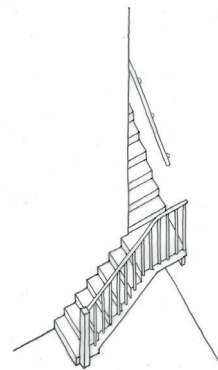
Porch - a covered entranceway.



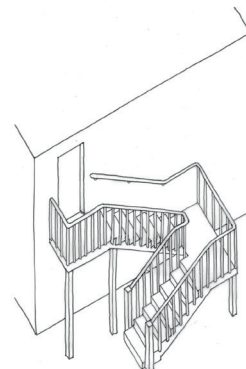
Ramp - an artificial inclined plane that may be constructed to give access to an upper level



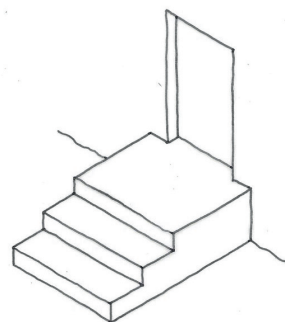
Staircase (inside) - a flight of steps inside a building



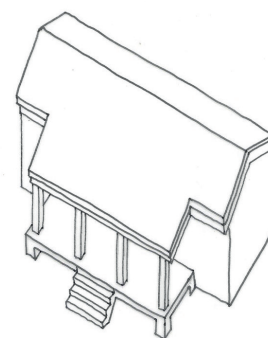
Stairs (outside) - a flight of steps on the outside of a building



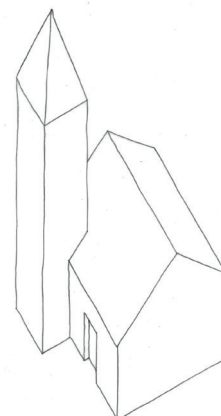
Steps - structure designed to bridge a large vertical distance by dividing it into smaller vertical distances



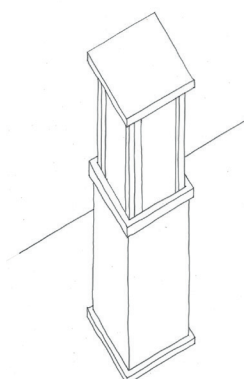
Veranda - covered but open-sided shelter, generally built of light materials, attached to a building and sometimes serving as a porch.



Tower - a tall structure freestanding or attached to another structure serving various purposes including lookout, bell tower or minaret.



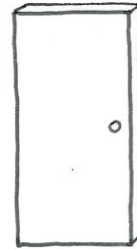
Windcatcher - a structure built on the roofs of houses to catch prevailing breezes and channel them into the rooms below to cool and ventilate them.



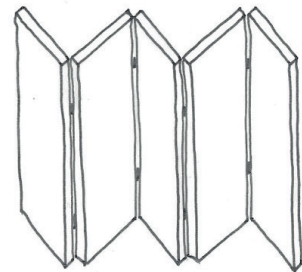
8

DOORS

Flush door - a flat door made up of a single panel or where all the panels and mouldings are in the same plane.



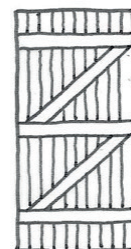
Folding door - a door which opens by folding back in sections or panels.



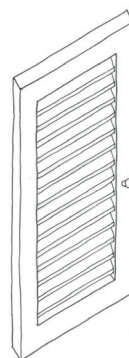
Ledged and battened door - a door made up of vertical boards supported on the back by horizontal rails (ledges).



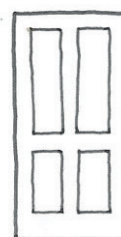
Ledged and braced door - a door made up of vertical boards supported on the back by horizontal rails (ledges) and a diagonal brace.



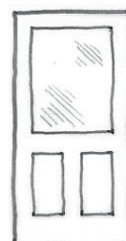
Louvered door - a door with fitted with horizontal boards or louvers sloping downwards and outwards, each board lapping over the one below. A louvered door is typically used to aid ventilation.



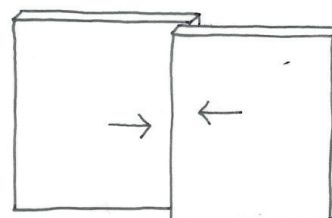
Panelled door - a door with a frame and one or more panels, in which the exposed frame surrounds the panels that can be plain, decorated, raise or fielded.



Panelled door with glazing or vents - a panelled door where one or more of the panels are glazed or are used as vents, such as with louvres.

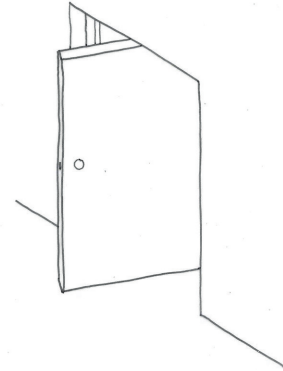


Sliding door - a type of door which opens horizontally by sliding along a track.

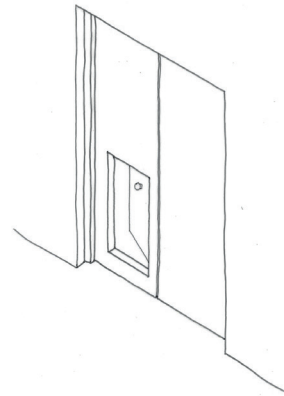


8 DOORS

Pivoted door - a door that turns on pivots at the top and bottom.



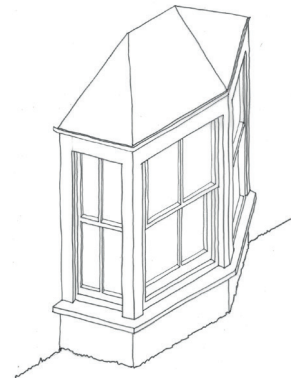
Wicket door - or simply a wicket, is a small door forming part of a very large one.



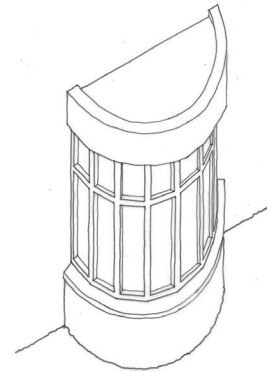
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WINDOWS

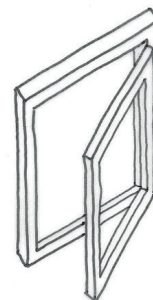
Bay window - a projecting window assembly extending from a room, curved, faceted or semi-circular in plan.



Bow window - a curved bay window.

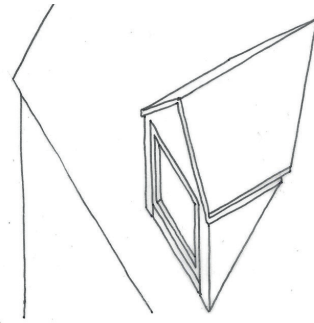


Casement window - the frame (glazed) of the window is fixed vertically and swings in or out.

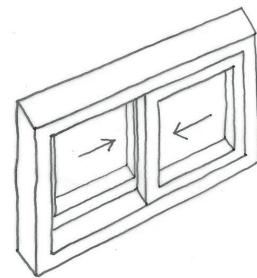


9 WINDOWS

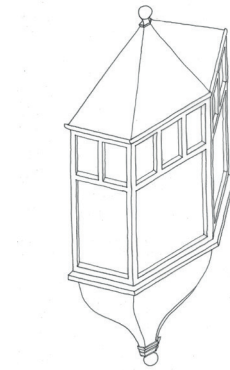
Dormer window - a window inserted in the pitch of a roof, with its own roof and vertical glazing



Horizontal sliding sash - a sliding window moving horizontally within a frame.

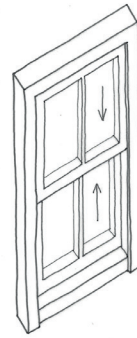


Oriel or projecting window - a projecting bay window of an upper storey, supported by a corbel or other feature.

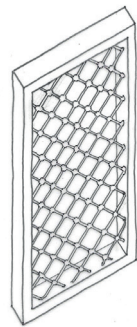


Shutters - a sliding or folding door for the purpose of closing a window on the inside or the outside.

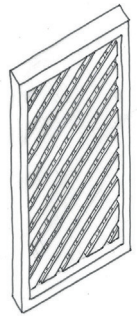
Vertical sliding sash (box sash) - a sliding window moving vertically within a frame.



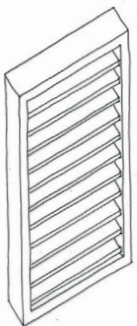
Window grille (metal) - a frame of iron or other metal, often with parallel bars, used in windows for ventilation and protection.



Window grille (wooden) - A frame of wood, often with parallel bars, used in windows for ventilation and protection



Window with louvre - window with lateral slats to repel water or glare, and inclined to expel air or smoke.



Architrave - a formalised beam or lintel OR elaborate mouldings framing a doorway.

Batten - a thin, narrow strip of wood, used for purposes such as fixing roof tiles or supporting lath and plaster (see Figure A).

Beam - a horizontal structural component supported by posts or masonry structures.

Board - thin long slab of timber (see Figure A for floor board)

Bow - (boats) most forward part of a boat.

Brace - straight or curved component in a timber frame fixed at an angle between vertical and horizontal members, for the purpose of stiffening through triangulation (see Figure A).

Bracket - a member or form of brace projecting from a wall that supports an overhanging component (see Figure B).

Buttress - a straight, arched or raked component constructed in conjunction with a wall to provide additional stability or counter the outward thrust of an arch (see Figure B).

Clap-board - wooden boards fixed to the exterior of the building in horizontal strips that are either feathered and overlap or are jointed. Also referred to as **wooden siding** or **weatherboarding**.

Collar beam - (roof structure) the horizontal component connecting pairs of rafters at a point higher than the wall plate, often close to the apex of a roof.

Curtain wall - an interior or exterior wall enclosing a space, but not having a structural function such as supporting a roof.

Dado - (interior) the lower section of an inside wall, may be panelled (also referred to as wainscot).

Fretwork - interlaced decorative design carved in low relief or cut out with a saw.

Hull - (boats) body or frame of a boat/ship, most of which lies under water.

Hull planking - (boats) wooden planks fixed to the hull frame making up the outer skin of the hull.

Inlaid work - decoration made by inserting one material within an insertion cut into another, such as one colour of wood into another, also referred to as **marquetry**.

Joist - one of a series of horizontal timber components spanning the space between walls/beams and supporting the floor finish and ceiling (See Figure A).

Keel - (boats) the lengthwise timber that runs along the base of a boat and supports the framework of the hull, sometimes extending downwards as a ridge to increase stability.

Lath and plaster - wall finish where thin strips of wood secured to beams, rafters or studs are plastered.

Matchboard - a board with a groove cut along one edge and a tongue along the other so as to fit with the edges of similarly cut boards.

Matting - prefabricated panels or sheets made from different vegetal materials (palm, reed, rattan) that are woven or tied together, and used for floor, wall or roof cladding.

Mullion - vertical component dividing a window or screen.

Newel - the post at the centre of a winding staircase, or the post supporting the handrail and string at the angle of a square staircase.

Panelling - a wooden wall finish made up of panels or panes.

Parquet - (flooring) a floor finish of wooden blocks laid in a pattern on a solid base.

Peg - see Pin

Pin - small wooden fixing used to secure two timber components.

Pinnacle - an ornamental pyramid or cone used as a decorative feature terminating a buttress, parapet, turret, spire etc.

Plank - a long flat piece of timber that is thicker than a board.

Post - vertical structural timber supporting a lintel or lateral attachment (as in a gate for example). Also used for the upright (vertical) components in a truss (see Figure A)

Purlin - (roof structure) a horizontal timber beam positioned on a roof truss to provide intermediate support to the rafters (see Figure A).

Rafter - (roof structure) a long inclined timber component making up a pitched roof (see Figure A).

Principal rafter are the larger rafters that carry the purlins supporting the common rafters.

Common rafters are placed at regular intervals along the sloping section of the roof.

Hip rafters are set diagonally at the hip where two roof slopes meet.

Valley rafters are set diagonally where two roof slopes meet in a valley.

Ridge - (roof) the apex of a pitched roof where the two roof slopes meet.

Shingles - thin wooden slabs cut to uniform sizes and used as roof tiles or as cladding.

10 OTHER TERMS

Sill plate - the horizontal wooden component in a timber frame placed at the base and onto which the posts or studs are fixed. Also known as base plate (see Figure A).

Soffit - the underside of an arch or opening.

Stem - (boats) the most forward part of a boat's bow, may be the extension of the keel.

Stern - (boats) the back or aft-most part of a boat, the area built up over the sternpost,

Stud - a subsidiary vertical wooden component in a wall frame extending from the sill plate to the wall plate.

Thatch - roof covering using natural materials (plants) including straw, reeds, grasses.

Tie-beam - (roof structure) the horizontal component connecting pairs of rafters at wall-plate level; the lower chord of a truss (see Figure A).

Truss - (roof structure) rigid structural framework of timber bridging a space and carrying horizontal purlins that support the common rafters.

Composite truss is a truss combining timber components for compression and wrought iron components for tension.

Turned woodwork - wooden components, often used for decorative elements, produced by turning on a lathe.

Wall plate - the horizontal wooden component in a timber frame that spans the posts or is placed on a masonry wall on which the roof trusses or rafters are placed. Also referred to as top plate (see Figure A).

Wainscot - a wooden panelled dado (see also panelling)

Wattle-and-daub - an infill for timber frame structures made of a timber lattice onto which a mixture of clay, silt or dung with strengthening fibres such as straw are applied.

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