



**Digital Technology in Construction Methods**  
**Project: Modular Building System (MBS)**

The proposed building is constructed using a traditional cavity wall system, consisting of an outer brick leaf, insulation cavity, and inner blockwork leaf. The structure is supported by concrete strip foundations and a ground-bearing concrete slab with insulation. The roof is a pitched timber structure finished with roof tiles and insulated on either side. Internal finishes include plastered walls and standard floor finishes, while external finishes consist of facing brickwork and window systems.

The structure is supported by concrete and foundations, which distribute loads safely to the ground, and a ground-bearing concrete slab incorporating insulation to enhance energy efficiency and occupant comfort. Design standards are assessed at appropriate levels to prevent CO<sub>2</sub> emissions.

The roof is formed using a traditional timber structure, typically comprising rafters, trusses or other beams, and a thick external finish. This provides structural stability while maximizing thermal efficiency.

Openings such as windows are fitted with UPVC frames and include components such as lifts to shed water away from the building envelope. Internal finishes include plastered walls and standard floor finishes, while external finishes consist of durable facing brickwork and roof tiles designed to withstand environmental conditions.

### FLOOR PLAN



- External Frame
- Internal Frame
- Room Separation