# **AS Unit 1: Our Built Environment**

## 2.1.1: BUILDING LIFE CYCLE (1 of 2)

## **KEY TERMS**

Term Definition	
Life Cycle	The stages a building or other structure undergoes during its lifetime from strategic definition to demolition.
RIBA	Royal Institute of British Architects. The UK's chartered body for architecture concerned with maintaining high quality, building design and professional standards.
The RIBA Plan of Work	A guidance plan that organises the process of briefing, designing, delivering, maintaining, operating and using a building into eight stages.
Procurement	The process of purchasing goods or services.
Design	The application of architectural, engineering and technical skills to create a building to meet agreed requirements.
Construction	The preparation of land and use of materials, plant and labour to carry out building work.
Operation	The management of a built environment to provide suitable and safe conditions for occupants and their activities.
Repurposing	The change of use of a building or structure, that usually involves alteration and refurbishment.
Demolition	The process of taking down a building or other structure and safely disposing of materials arising.

#### 1. DESIGN

Building design is a collaborative process involving a client and a design team usually led by an architect. A client will identify building requirements. The design team will work with the client to define a brief and develop a solution, in terms of function, performance, aesthetics and budget, to meet the requirements.

The RIBA Plan of Work includes four design stages, as shown.

## **RIBA Plan Stages 0 - 4**

Stage 0	Strategic definition of the client's business case.
Stage 1	Establish project objectives, outcomes and budget.
Stage 2	Develop architectural concept design including outline structural and services designs.
Stage 3	Developed design leading to application for planning permission.
Stage 4	Detailed technical design with material and performance specifications and application for Building Regulation approval.

#### Procurement

There are many different routes for the procurement of the design and construction of a building. The design stage will include decisions regarding the procurement of the construction stage, which may range from traditional competitive tendering, design and build, or management contracting, where the building is constructed by a number of different works contractors who are contracted to a management contractor.

## **GCE AS and A level BUILT ENVIRONMENT**

- repurposing)
- - services.

including:

- of any prefabricated parts.
- behalf of the client.
- Arranging for the installation and commissioning of services.

liability period'.



### 2. CONSTRUCTION

- Construction is the carrying out of building work, including:
  - new buildings and structures
  - assembly on site of prefabricated elements
  - conversion and renovation of existing buildings (\*see

civil engineering works, e.g. roads and bridges. installation of mechanical, electrical, gas and communication

- The construction industry is made up of clients, developers, consultants, manufacturers, suppliers and contractors.
- The construction stage of the life cycle will begin with the appointment of a main contractor and end with the handover of the finished building to the client.
- During the construction stage the main contractor will be responsible for programming and managing the work on site,
  - Arranging for the supply of materials to site and liaising with any specialist suppliers nominated on behalf of the client. Carrying out the building work safely, including the assembly
  - Arranging for work to be carried out by sub-contractors and liaising with any specialist sub-contractors nominated on
- The main contractor will also be responsible for making good of any defects that arise after handover, for an agreed 'defects

