

# TQUK Level 3 Diploma in Design, Engineer, Construct: The Digital Built Environment (RQF)

## Resource Document

### Scenario and brief

#### Scenario

The site is adjacent to and accessed from The Stray, in the village of South Cave. The site totals approximately 1,900 sqm. A planning application for 4 dwellings has been approved.

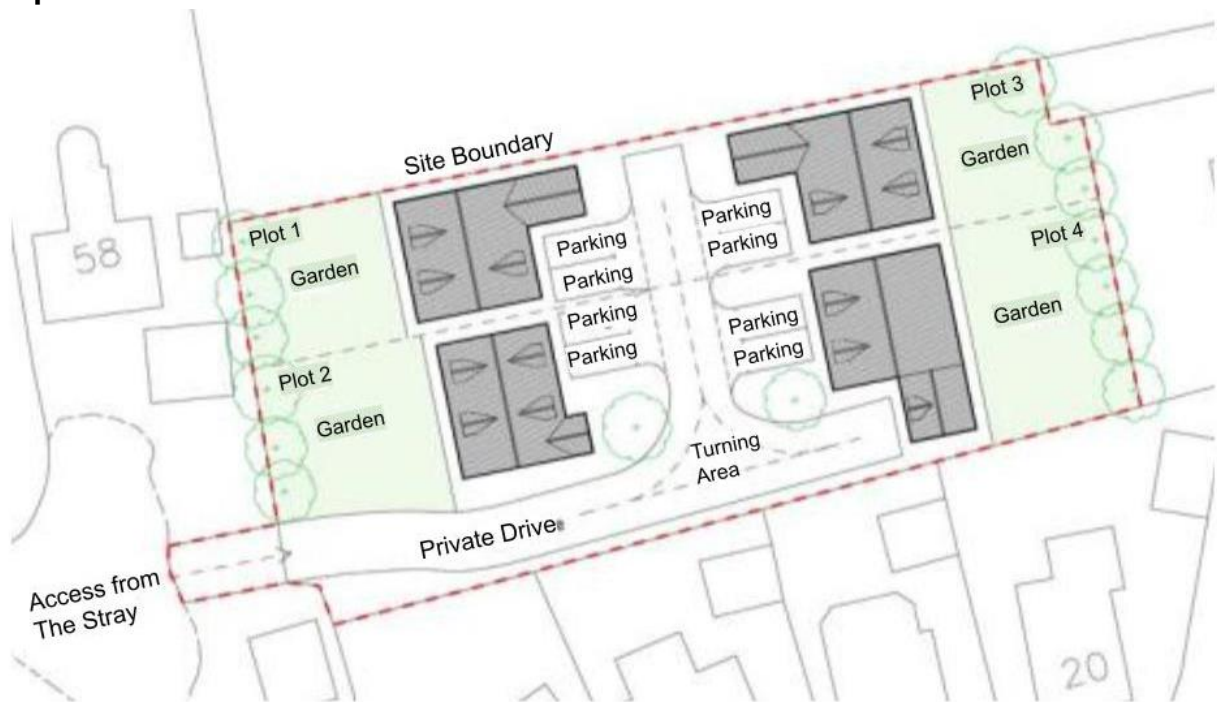
South Cave lies approximately 12 miles to the west of Hull. The historic market town of Beverley is approximately 9 miles away. The village is ideally placed for travelling to Hull, Beverley, York and Leeds, with immediate access to the A63/M62 motorway network. There is a main line railway station in the nearby village of Brough.

South Cave has a variety of amenities including convenience shops, a baker's, a butcher's, pubs and restaurants. It also has the Cave Castle Hotel, a golf course and a spa country club. The village has a junior school and is a short distance from a large secondary school with a sixth form.

#### The Brief

The design brief states the properties will be timber-clad eco-homes, the shape and design of which will mimic those within the locality. These eco-homes will be built to Passivhaus principles with low-carbon living in mind. Virtually no steel or concrete will be used during the house's construction. The timber frame structure will be heated via an air source heat pump and insulated with a sustainable blend of recycled paper and timber insulation boards. Outside, the barn-like exteriors will be finished with high-performance cladding, specified in two different widths to create visual interest. This style will be carried inside with timber and clay plaster finishes, connecting the house with its woodland, village setting.

**Map:**



### **Building Data**

- 1,900 m<sup>2</sup> plot £650,000
- Plot 1 footprint 110 m<sup>2</sup>
- Plot 2 footprint 100 m<sup>2</sup>
- Plot 3 footprint 98 m<sup>2</sup>
- Plot 4 footprint 110 m<sup>2</sup>
- Build cost of each plot £1950 per m<sup>2</sup>

### **Additional Property Data**

- Average lighting: 250 lux
- Average room height: 2,400mm
- Ventilation system air flow rate: 400 m<sup>3</sup>/h
- Triple glazing U-value: 0.80 W/m<sup>2</sup>K
- 3 bedrooms, 2 bathrooms, 2 reception rooms
- External cladding 108m<sup>2</sup> per property.

## **Costs and value**

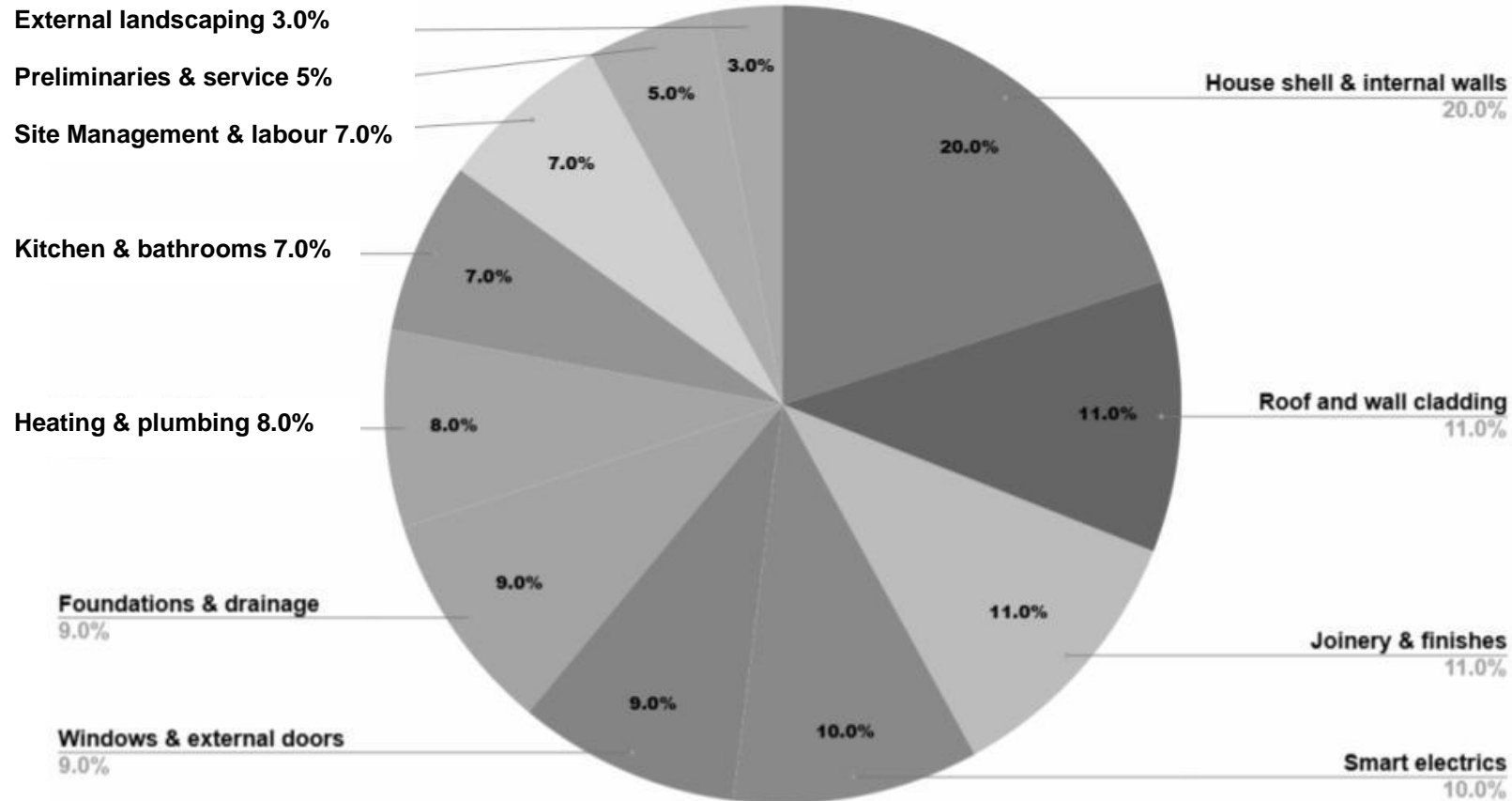
### **Additional Costs**

- 12% Professional fees
- 6% Insurances
- 5% Contingency

### **Property Value on Completion**

- Plot 1 £590,000
- Plot 2 £585,000
- Plot 3 £590,000
- Plot 4 £595,000

### Cost-based Model:



**End of Resource Document**