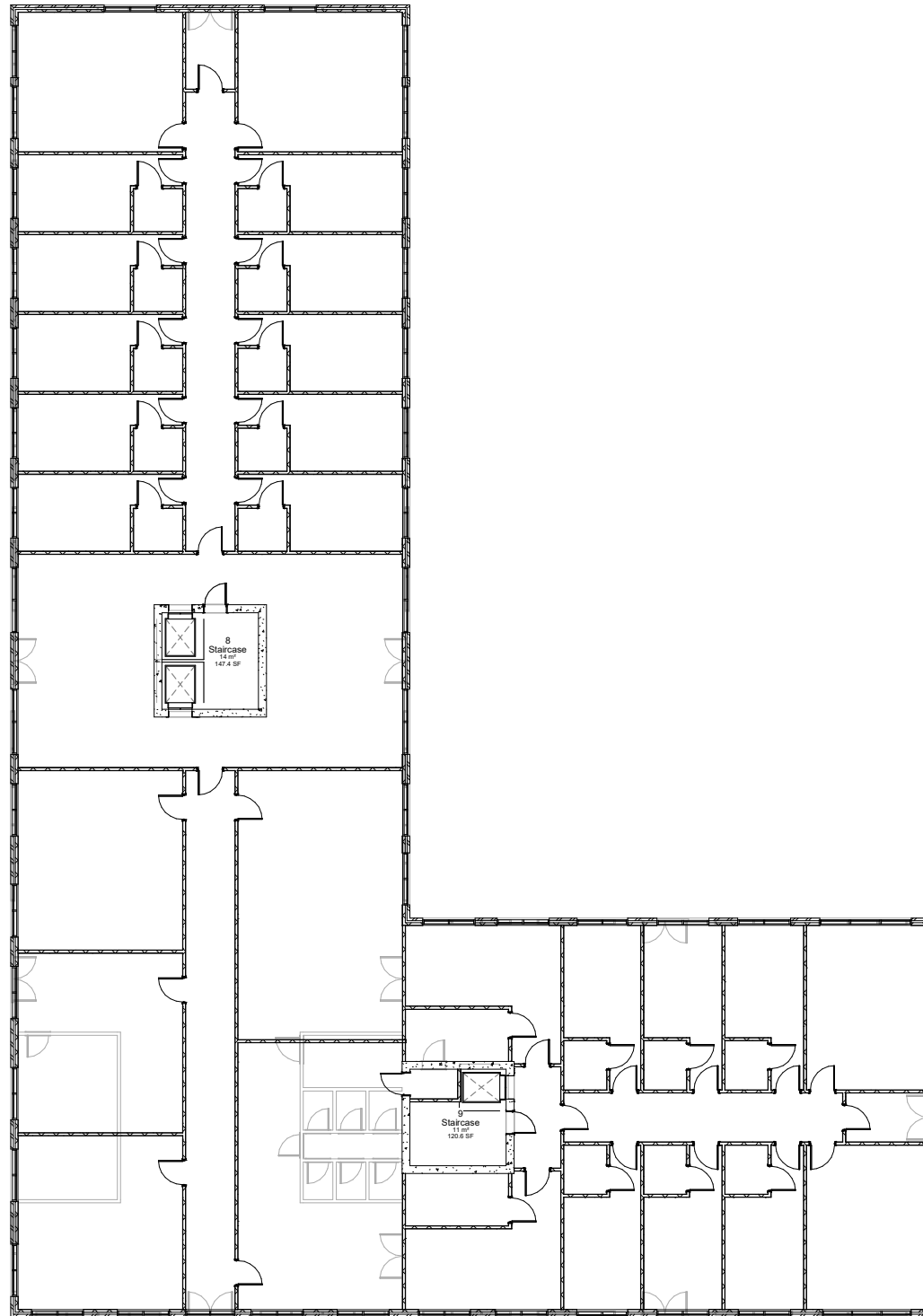
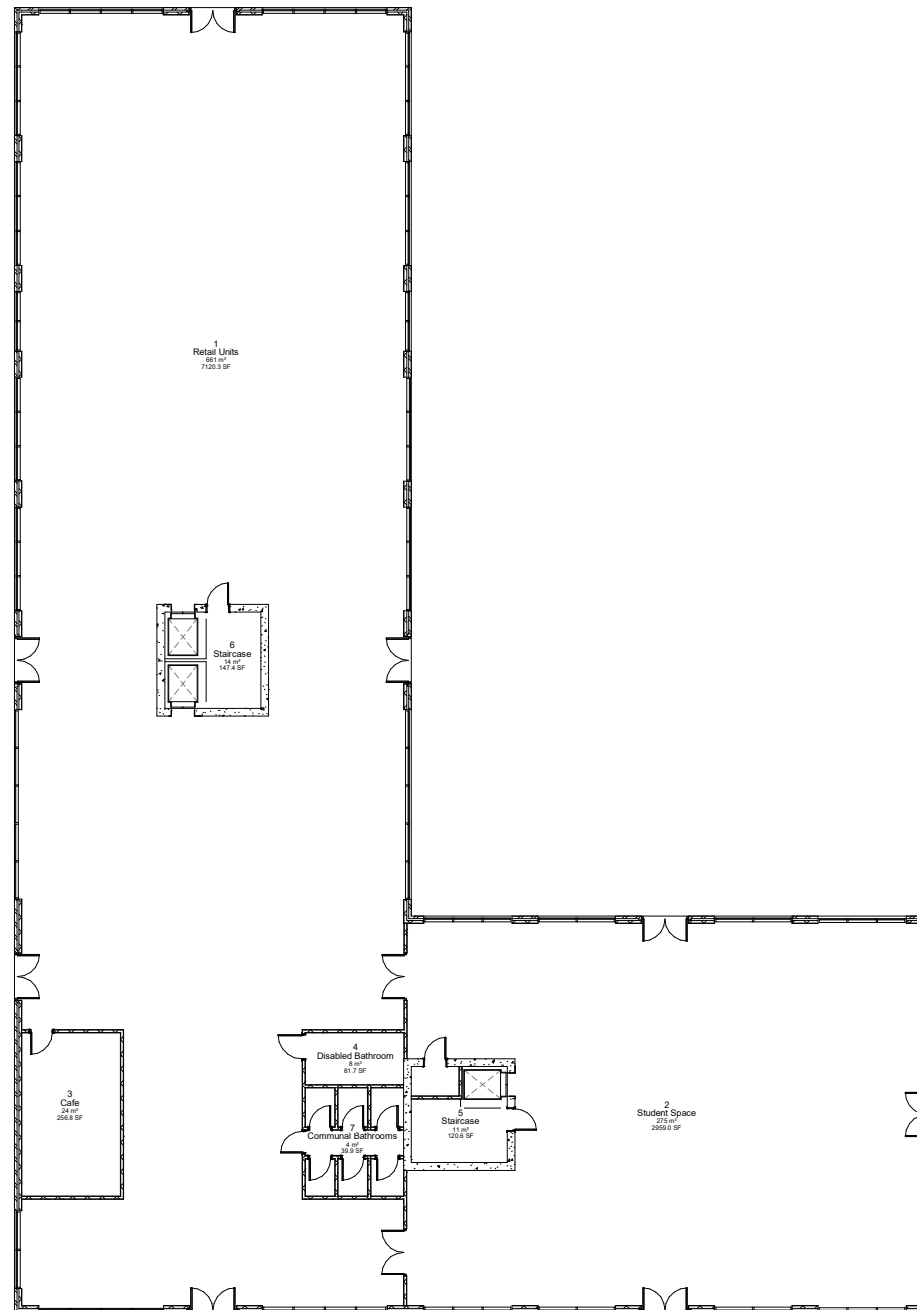
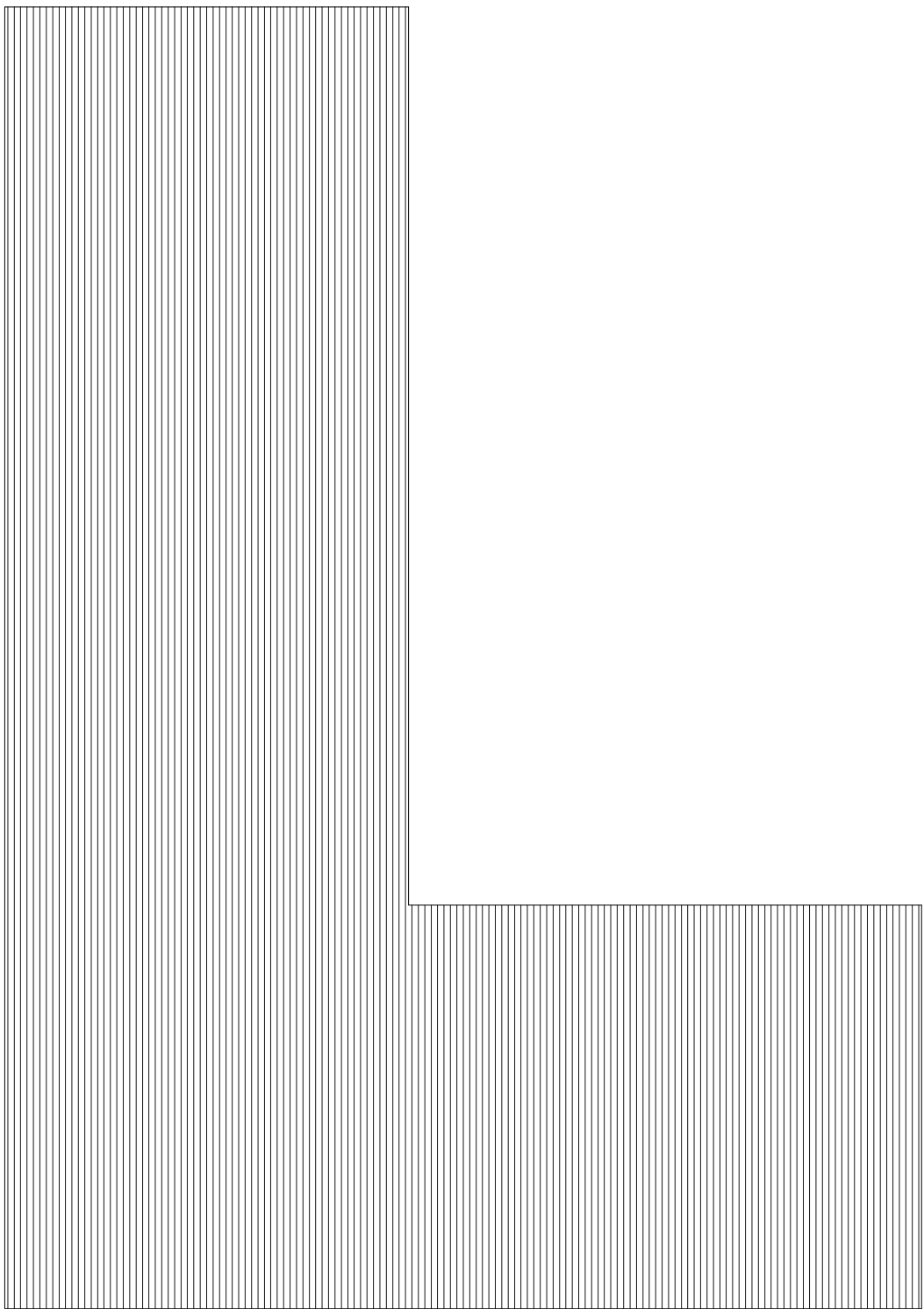
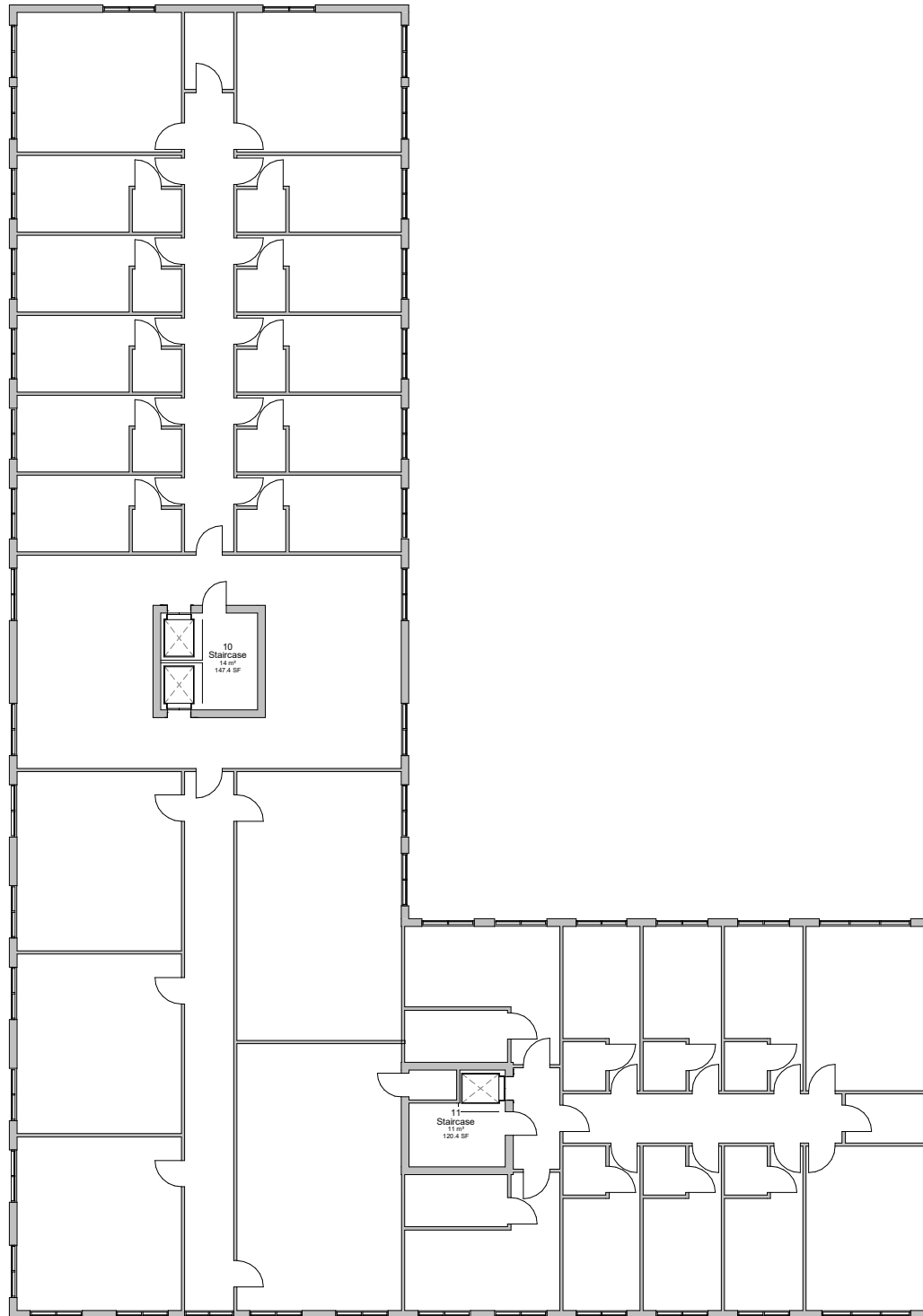










	Type	Option 1 Specification	Option 1 Cost	Option 2 Specification	Option 2 Cost	Selected Option	Notes/Justification
1.0	SUBSTRUCTURE						
1.1.1	Foundations	Raft foundations simple reinforced concrete raft on poorer ground for development up to two storey high	£205/m2	N/A	N/A	Raft foundations simple reinforced concrete raft on poorer ground for development up to two storey high	Raft foundations were the obvious choice, as these work very well with piles, which were required considering the ground conditions.
1.1.2	Piles	Tension Driven piles	£9,500/m2	Reinforced Concrete CFA piles	£155/m	Driven piles	Driven piles work better for this type of terrain, as you don't have to worry about pouring concrete.
2.0	SUPERSTRUCTURE						
2.1.1	Frame	Steel frame; composite beam and slab floors Suspended slab; permanent steel shuttering with 130 mm thick concrete; no coverings or finishes	£180/m2	Concrete frame; flat slab reinforced concrete floors up to 250 mm thick Suspended slab; no coverings or finishes up to 6 storeys	£180/m2	Steel frame; composite beam and slab floors Suspended slab; permanent steel shuttering with 130 mm thick concrete; no coverings or finishes	Steel frame was the obvious choice, as it's more environmentally friendly and suitable for this type of project.
2.2.1	Upper Floors	Precast concrete suspended floors; 1200 mm wide suspended slab; 75 mm thick screed; no coverings or finishes		Softwood floors Joisted floor; plasterboard ceiling; skim; emulsion; t&g chipboard, sheet vinyl flooring and painted softwood skirtings		Precast concrete suspended floors; 1200 mm wide suspended slab; 75 mm thick screed; no coverings or finishes	Precast concrete floors work best, as other alternatives such as timber can't provide the load bearing capacity that concrete can.
2.3.1	Roof	Flat Roof		Pitched Roof		Flat Roof	A flat roof is most suitable, as the ventilation units can be stored on the roof, along with solar panels that can be fitted to the required angle easier.
2.5.3	Cladding	Terracotta rainscreen cladding; aluminium support rails; anti-graffiti coating	£530/m2	Trespa single skin rainscreen cladding, 8 mm thick panel, with secondary support/frame system; adhesive fixed panels; open joints; 100 mm Kingspan K15 insulation; aluminium subframe fixed to masonry/concrete	£305/m2	Trespa single skin rainscreen cladding, 8 mm thick panel, with secondary support/frame system; adhesive fixed panels; open joints; 100 mm Kingspan K15 insulation; aluminium subframe fixed to masonry/concrete	Trespa cladding is cheaper and more affordable whilst providing similar benefits to terracotta.
2.6.1	Windows	Steel windows (U-value = 1.6 W/m2 K) Purpose-made windows double glazed; powder coated	£660/m2	Composite aluminium/timber windows; U value = 1.5 W/m2 K Purpose-made windows; stainless steel ironmongery; Velfac System 200 or similar	£650/m2	Composite aluminium/timber windows; U value = 1.5 W/m2 K Purpose-made windows; stainless steel ironmongery; Velfac System 200 or similar	Aluminium was selected, as they are less susceptible to rust, and are more suited to this type of building.
3.0	INTERNAL FINISHES						
3.1.1	Wall finishes	Two coats of lightweight plaster with emulsion finish	£17.90/m²2	Flame-retardant paint Unitherm or similar; two coats	£23/m²2	Flame-retardant paint Unitherm or similar; two coats	This provides better fire safety properties, whilst still providing an aesthetically pleasing finish.
3.2.1	Floor finishes	Safety Vinyl	£59/m²2	Resin	£57/m²2	Safety Vinyl	Vinyl was selected for the majority of the flooring, which is fairly common in this type of building, although carpet tiles will be used for the dorms.
3.3.1	Ceiling finishes	Integrated ceilings acoustic suspended ceilings on anti vibration mountings	£84/m²2	Plasterboard ceilings	£29/m²2	Both	Integrated ceilings will be used for the ground floor, whilst plasterboard ceilings will be utilised on the first and second floor. These were selected as acoustic ceilings reduce echoing and plasterboard gives the residential units a less commercial feel.



