

LANDSCAPING PLAN

BILL OF QUANTITIES (BoQ)

Description of Works

The proposed scope of works covers the **outdoor landscaping, external works & site improvements** for Higher Education institutes. The works are designed to create a functional, durable, and aesthetically appealing environment for students, staff, and visitors, integrating modern outdoor structures, seating, shading, and lighting features with landscaped walkways and planter installations.

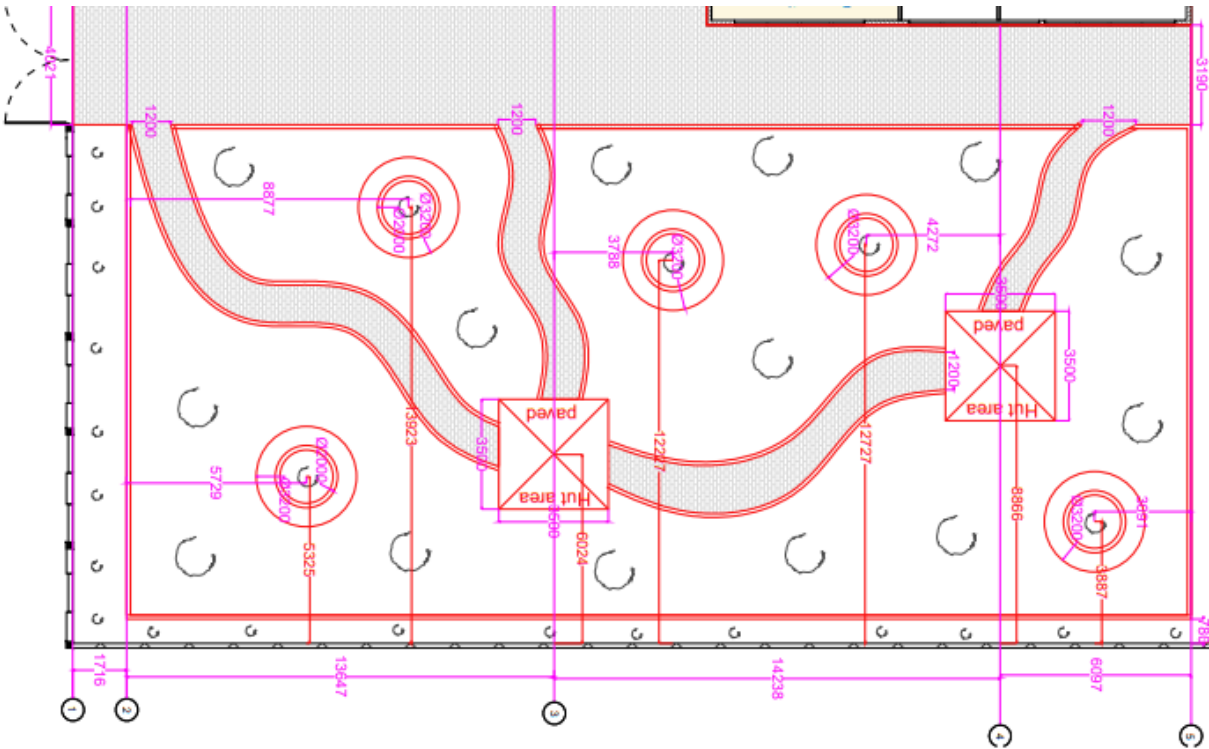
Key components include:

- **Preliminaries & External Works:** Construction of curved walkways using interlocking concrete paving blocks, laid on a compacted base with cement edge restraints, providing durable and visually cohesive pedestrian circulation.
- **Structures & Shade Elements:** Installation of outdoor shading structures including sail shade canopies, a pergola-style gazebo with adjustable louvered roof, and a freestanding outdoor pavilion. These provide shaded and weather-protected areas for outdoor learning, social interaction, and multipurpose use.
- **Benches & Seating:** Supply and installation of modular precast curved benches, stainless steel/WPC outdoor benches, and traditional wooden and cast iron benches. Designed for durability, comfort, and aesthetic integration, these seating solutions cater to group and individual use.
- **Lighting & Electrical:** Provision of modern lighting posts, pathway bollards, and outdoor weatherproof power points to ensure adequate illumination, safety, and functionality in landscaped areas. All fittings specified to meet IP65 standards or higher, ensuring resilience against outdoor conditions.
- **Outdoor Planters:** Placement of large decorative round planters (GRC/FRP composite) with drainage provisions, adding greenery and enhancing the landscaped character of outdoor areas.

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SECTION A: PRELIMINARIES & EXTERNAL WORKS

Item No.	Description	Detailed Specifications	Unit	Qty
A1	Walkways (Curved Paving)	Interlocking concrete pavers, 60mm thick, laid on compacted sand bed with cement edge restraint. Paver colors selected in light beige/grey to complement building façade. Curved layout per site plan.	m ²	220



Preferred type of paving block



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SECTION B: STRUCTURES & SHADE ELEMENTS – CANOPIES

Item No.	Description	Detailed Specifications	Unit	Qty
B1	Sail Shade with Poles	Outdoor sail shade canopy with supporting poles. Size approx. 12 ft (3.6 m) span per side, triangular/rectangular as per layout. Shade fabric: HDPE or outdoor-grade polyester, UV-resistant (≥95% UV block), water-resistant, mildew-resistant, breathable, reinforced edges with stainless steel D-rings. Poles: 2 stainless steel poles, 8–10 ft height, 75–100 mm diameter, with flanged base plates anchored in reinforced concrete footing. Hardware: marine-grade stainless steel (turnbuckles, shackles, eye bolts, tensioners), corrosion-resistant. Colors: black, beige, grey, or custom to match building theme. Installation: includes all fittings, bolts, hooks, and tensioning system. Features: provides sun/light rain protection, modern aesthetic, easy to adjust, durable and low-maintenance.	no.	1



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Item No.	Description	Detailed Specifications	Unit	Qty
B2	Pergola-Style Gazebo with Louvered Roof	Modern freestanding pergola/gazebo structure. Dimensions approx. 10–12 ft (L) × 10–12 ft (W) × 8–9 ft (H). Frame: powder-coated steel/aluminium in white finish, corrosion-resistant, minimalist design. Roof: flat louvered panels with adjustable slats, weather-resistant and UV-protected. Fixing: structural frame anchored to reinforced concrete foundations (minimum 600×600×600 mm footings) with concealed anchor bolts to ensure rigidity against wind loads. Design: open-sided, sleek pergola style, compatible with lounge seating, dining, or multipurpose outdoor use. Features: modular construction, contemporary appearance, integrates with landscaping and matches building façade.	set	1



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Item No.	Description	Detailed Specifications	Unit	Qty
B3	Freestanding Outdoor Hut (Gazebo / Pavilion Type)	Modern minimalist design, open-sided hut structure. Frame: sturdy square-section posts, two-tone finish (white columns with dark grey roof edges), powder-coated steel/aluminium for corrosion resistance in coastal environments. Roof: flat solid roof in dark grey with a very narrow slope for controlled rainwater runoff; provides full shade and weather protection. Design: clean-line geometry, blends with contemporary landscaping and adjacent building façades. Fixing: hut posts anchored on reinforced concrete pad footings (600 × 600 × 600 mm minimum, adjusted per soil conditions), with base plates and concealed anchor bolts ensuring stability against wind loads. Function: designed for outdoor seating, study, and social gathering spaces, compatible with modular furniture layouts.	set	1



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SECTION C: BENCHES & SEATING

Item No.	Description	Detailed Specifications	Unit	Qty
C1	Outdoor Curved Bench (Circular Modular Seating)	<p>General: Precast reinforced concrete (RC) curved/circular bench for public landscaping, plazas, gardens, and institutional outdoor spaces. Shape: circular modular seating assembled in 2–4 segments to form a complete ring.</p> <p>Dimensions: Outer diameter ~2.5–3.0 m, inner void ~1.2–1.5 m (suitable for planter/feature), seat height 450–500 mm, seat width 400–500 mm, section thickness 80–100 mm.</p> <p>Materials: Precast RC (M30 grade or higher, min. compressive strength 30 N/mm²), reinforced with Fe500 TMT steel bars designed for ≥300 kg load per linear meter.</p> <p>Finish: smooth polished / terrazzo, with anti-slip treatment.</p> <p>Protective sealing: UV-resistant, water-repellent, anti-graffiti coating. Color: neutral tones (light grey/white) with integral pigment or surface finish.</p> <p>Construction & Installation: Modular precast segments (3–4 pcs), fine-tolerance joints sealed with non-shrink epoxy grout. Anchorage with concealed anchor bolts/dowels fixed to RCC pad base (150 mm min. thick, adjusted per soil condition). Sub-base: compacted hardcore 150 mm, sand blinding 50 mm, RCC leveling layer. Load capacity: designed to seat 10–12 persons simultaneously.</p>	no.	2



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Item No.	Description	Detailed Specifications	Unit	Qty
C2	Outdoor Bench (No Backrest)	Park/patio/courtyard bench without backrest. Frame: stainless steel (Grade 304/316), brushed or powder-coated. Seat: hardwood or WPC (wood-plastic composite) slats with weatherproof finish. Size: L 1200–1500 mm × W 400–450 mm × H 420–450 mm. Load capacity: ≥ 250 kg. Features: waterproof, rustproof, UV-resistant, anti-theft anchor option. Applications: walkways, courtyards, patios.	no.	3



Item No.	Description	Detailed Specifications	Unit	Qty
C3	Outdoor Wooden & Cast Iron Bench (with Backrest & Armrests)	length 1200–1500 mm, seating for 2–3 persons. Solid wood seat and backrest with waterproof, anti-corrosion finish. Cast iron frame and legs, powder-coated for weather and rust resistance. Ergonomic backrest and armrests for comfort. Load capacity ≥ 400 kg. Smooth edges, anti-snag design. Fixing: concealed anchor bolts/base plates into reinforced concrete pad. Low-maintenance, easy to clean.	set	5



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SECTION D: LIGHTING & ELECTRICAL

Item No.	Description	Detailed Specifications	Unit	Qty
D1	Modern Lighting Posts	Straight powder-coated aluminium poles (H = 2.2m), LED warm white lights, IP65-rated. Pole color in dark grey/black to match building accents.	no.	8



Item No.	Description	Detailed Specifications	Unit	Qty
D2	Pathway Bollard Lights	Height: 900 mm, Size: 120×120 mm, Die-cast aluminium body, powder-coated dark grey/black, frosted polycarbonate diffuser. LED: 12–18 W, 900–1500 lm, 3000K (warm white), CRI ≥80. Electrical: 220–240 V AC, PF ≥0.9, surge protection 4–6 kV. Protection: IP65, IK08. Installation: Surface mount with RCC base & concealed anchor bolts.	no.	10



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Item No.	Description	Detailed Specifications	Unit	Qty
D3	Outdoor Power Points	Weatherproof (IP66) double outlets in protective casings, installed at shaded seating/canopy areas. Casings finished in colors blending with adjacent structures.	no.	5



SECTION E: OUTDOOR PLANTERS

Item No.	Description	Detailed Specifications	Unit	Qty
E1	Large Outdoor Round Planter (Dia. 700–800 mm, H 700–800 mm)	GRC / FRP composite, smooth polished/matt finish, UV & water resistant, anti-corrosion coating, standard white/grey. Ø 700–800 mm × H 700–800 mm. With base drainage hole & filter mesh	no.	8

