NATURAL PLAY TRAIL OBSTACLE COURSE

Technical Construction & Material Specifications

DWG NO: BSS-OPD-001
Scale: 1:20 @ A4

1. OVERVIEW & SITE LAYOUT

This document details the engineering standards, spatial requirements, and assembly specifications for a continuous outdoor timber play trail obstacle course. Designed for installation in natural wood chip environments, prioritizing durability, timber joinery standards, and safety compliance.



Figure 1: Installed Play Trail Concept featuring Stepping Stumps, Suspension Rope Bridge, and A-Frame Cargo Net.

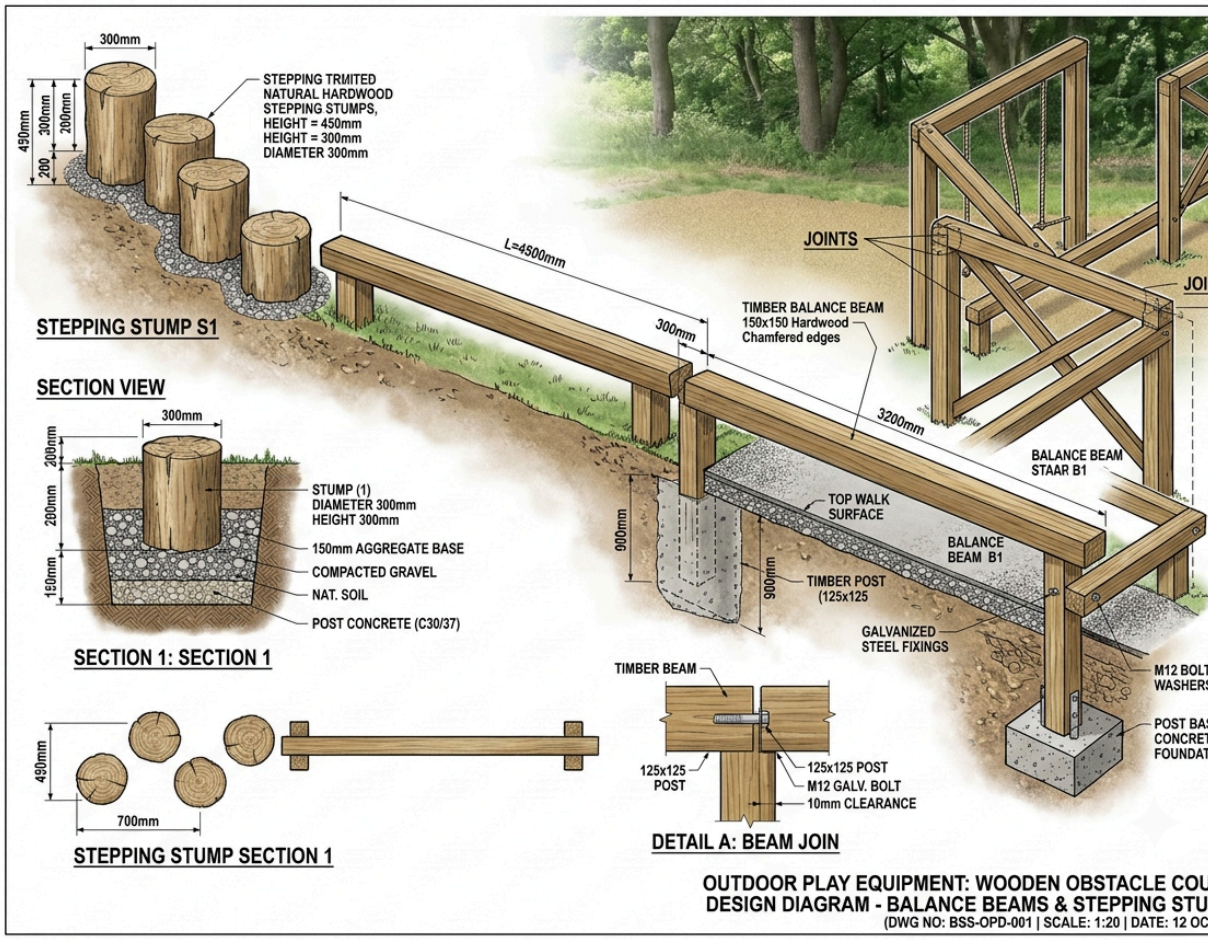

Figure 2: Technical Drawing (DWG BSS-OPD-001) – Section views and joinery details for Stepping Stumps and Balance Be

2. COMPONENT SPECIFICATIONS

Component	Dimensions & Materials	Foundation & Fixings
Stepping Stumps (S1)	Natural Hardwood (Treated) Diameter: 300mm | Height: 300mm–450mm	150mm Aggregate Base over Compacted Gravel with Post Concrete (C30/37).
Balance Beams (B1)	150mm × 150mm Hardwood Timber Length: 3200mm–4500mm (Chamfered edges)	125mm × 125mm Timber Uprights on Post Base Concrete Foundations using M12 Galv. Bolts.
Rope Bridge & Nets	16mm Steel-Core Polypropylene Rope A-Frame Timber Support Beams	Heavy-duty galvanized steel brackets and tamper-proof M12 connectors.

3. MATERIAL STANDARDS & SAFETY

TIMBER & HARDWARE SPECIFICATIONS

- **Timber Grade:** FSC-certified untreated Robinia or pressure-treated European Oak.
- **Fixings:** Hot-dipped galvanized steel bolts (M12) with 10mm clearance joints.
- **Edge Finish:** All exposed corners chamfered to a minimum 5mm radius.

SAFETY & FALL ATTENUATION

- **Safety Surfacing:** Minimum 300mm depth natural wood chip mulch or organic bark.
- **Impact Attenuation:** Tested for Critical Fall Height (CFH) up to 1.5m.
- **Compliance:** Built to EN 1176 playground equipment safety standard.