HIGH ROPES AERIAL ADVENTURE COURSE

Engineering, Safety System & Material Specifications

DWG NO: HRC-ENG-2026
Standard: EN 15567-1 & ACCT Standards

1. SYSTEM SCOPE & ARCHITECTURE

This document outlines the structural criteria, safety belay system standards, steel cable specifications, and installation protocols for an elevated multi-level High Ropes Aerial Course designed for challenge and adventure operations.

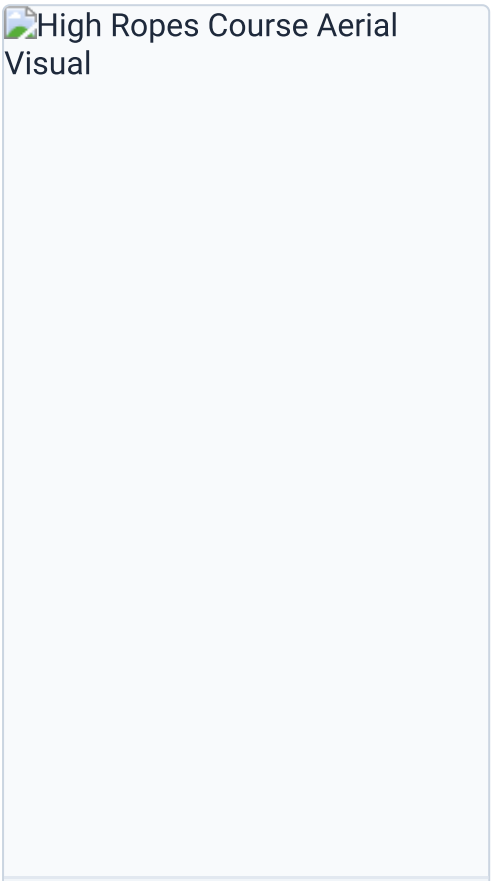


Figure 1: Elevated Multi-Level Platform & Obstacle Course Installation.

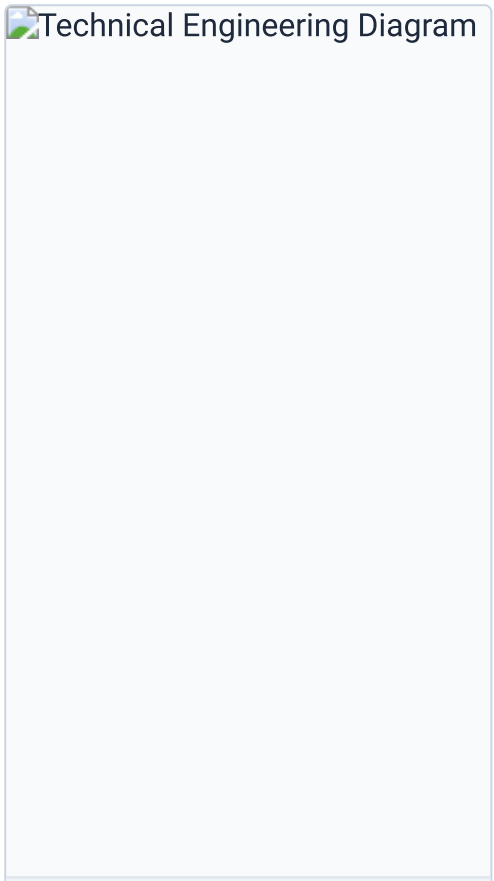


Figure 2: Technical Drawing (DWG HRC-ENG-2026) – Cable Anchor & Platform Detail.

2. TECHNICAL COMPONENT SPECIFICATIONS

Element / Module	Material & Dimension Specifications	Anchoring & Tension Ratings
Support Structures	Glulam Timber Poles (Ø 250mm–300mm) or Galvanized Steel Columns (CH355).	Reinforced concrete isolated footings (min. depth 1.8m) with heavy-duty base plate anchor bolts.
Continuous Belay Cable	12mm Galvanized Steel Wire Rope (7×19 strand rating, min. breaking strength 86 kN).	Continuous overhead safety rail or continuous belay wire with mechanical energy absorbers.
Aerial Platforms	Pressure-treated larch/oak timber decking (45mm thickness) with anti-slip scoring.	Heavy-duty steel collar clamps bolted around structural posts (no direct drilling into poles).
Obstacle Elements	Burma Bridge, Cable Traverse, Log Ladders, Barrel Crawls, and Zip Line Exits.	16mm steel-reinforced rope assemblies with hot-dipped galvanized steel turnbuckles and shackles.

3. SAFETY SYSTEMS & COMPLIANCE STANDARDS

PPE & FALL PROTECTION

- **Belay System:** Category E Continuous Belay System (uninterrupted connection from start to exit).
- **Personal Gear:** EN 12277 compliant full-body harnesses with EN 17109 interlinked smart lanyards.
- **Rescue Equipment:** Integrated dual-line operator rescue system and emergency lowering kit.

STRUCTURAL INSPECTION & MAINTENANCE

- **Design Standards:** Certified to EN 15567-1 (Ropes Courses Construction & Safety).
- **Inspection Cycle:** Pre-use daily operational checks, quarterly cable tension audits, and annual EN 15567-2 certification inspection.
- **Operational Wind Limit:** Automatic closure protocol at sustained wind speeds exceeding 40 km/h.