



Physical Security Design Course: CPTED, Hostile Vehicle Mitigation and Blast Protection



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Introduction:

Physical security design with CPTED, hostile vehicle mitigation and blast protection is a 1-week course for security consultants, architects, civil designers and facility and event planners that ends with a Protective Design Brief and HVM Layout for a case site. Organisations add bollards, fences and anti-shatter film after a building opens, with gaps that a vehicle or blast assessment would have exposed at concept stage. Nominees already contribute to site layouts, design reviews or event plans, and the course is taught as an inspection walkthrough of case sites. CoreConcept Training Center delivers this physical security design course.

Course Objectives:

- Define a threat-led protective design basis that states the attack scenarios, assets and crowd areas a site layout must resist
- Apply CPTED natural surveillance, territorial reinforcement and activity support principles to masterplans and public realm drawings
- Set stand-off distances and perimeter lines that keep hostile vehicles and blast effects away from facades and crowded spaces
- Select vehicle-rated barriers and bollards from a vehicle dynamics assessment and IWA 14 or PAS 68 impact ratings
- Specify glazing, facade anchorage and entry control point layouts that reduce blast injury and keep search areas workable
- Prepare a Protective Design Brief and HVM Layout that integrates civil measures with detection, lighting and access control

Target Audience:

- Security consulting staff responsible for threat assessments and protective security advice on building projects
 - Architectural and landscape design staff responsible for site layouts, public realm and building envelopes
 - Civil and structural design staff responsible for foundations, barrier lines, facades and progressive collapse checks
 - Facility and estates staff responsible for perimeters, entrances and vehicle access on operating sites
 - Event and venue planning staff responsible for crowd routes, temporary barriers and vehicle exclusion zones
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Course Outline:

Day 1: Threat-Led Design Basis and Site Vulnerability Context

- Operational Requirement Process for Protective Security Design Projects
- Threat Scenario Selection for Vehicle, Blast and Intrusion Attack
- Asset and Crowd Density Mapping on Site Plans
- Deter, Detect, Delay and Respond Layering Applied to Layouts
- Existing Site Vulnerability Walkthrough Using Design Review Checklists

Day 2: CPTED Principles, Layered Perimeters and Stand-Off Planning

- CPTED Natural Surveillance and Sightline Analysis on Masterplans
- CPTED Territorial Reinforcement Through Paving, Planting and Boundaries
- Second Generation CPTED Activity Support in Public Realm
- Stand-Off Distance Zoning From Facades and Crowded Spaces
- Perimeter Line Selection Using Fences, Walls and Level Changes

Day 3: Hostile Vehicle Mitigation and Vehicle-Rated Barrier Selection

- Vehicle Dynamics Assessment of Approach Routes and Speeds
- IWA 14 and PAS 68 Impact Rating Interpretation
- Fixed, Retractable and Shallow-Mount Bollard Selection Criteria
- Landscape HVM With Planters, Street Furniture and Sculpture
- Barrier Foundation, Spacing and Pedestrian Permeability Detailing

Day 4: Blast-Resilient Envelope, Entry Control Points and System Integration

- Glazing Hazard Reduction With Laminated Glass and Film
- Facade Frame Anchorage and Progressive Collapse Avoidance Measures
- Vehicle Search Area and Entry Control Point Layout
- Electronic Security Integration With Barriers, Detection and Lighting
- Temporary HVM Deployment for Stadiums and Major Events

Day 5: Inspection Walkthrough and Protective Design Brief Build

- Case Site Walkthrough Scoring Perimeter and Approach Weaknesses
 - Case Site Vehicle Dynamics Plot and Barrier Line
 - Case Site Stand-Off and Glazing Upgrade Option Comparison
 - Case Site CPTED Review of Public Realm Spaces
 - Protective Design Brief and HVM Layout Completion and Review
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Skills You Will Gain:

- Protective Design Basis Writing
- Sightline and Surveillance Analysis
- Stand-Off Zoning
- Vehicle Dynamics Plotting
- Barrier Impact Rating Interpretation
- Glazing Hazard Assessment
- Entry Control Point Planning
- Civil and Electronic Security Coordination

Why Attend This Course:

- Hand a Protective Design Brief and HVM Layout for a case site to the project design lead and the security risk owner
- Decide where the barrier line, stand-off zone and vehicle search area belong before drawings are frozen
- Avoid costly retrofits of bollards, film and fences that leave vehicle approach routes or glazing hazards open
- Share vehicle dynamics plots, CPTED review sheets and barrier selection checklists with design and facility colleagues

Conclusion:

Back at work, the participant gives the Protective Design Brief and HVM Layout to the project design lead, the security risk owner and the facility or event manager. They use it to fix the barrier line, stand-off zones, glazing specification and entry control point layout at concept or refurbishment stage, and to brief barrier and electronic security suppliers. After the first design review or event deployment, the unit should check the barriers, sightlines and search areas against the brief and update the threat scenarios.

Frequently Asked Questions FAQ:

What should participants know before a physical security design course on CPTED, hostile vehicle mitigation and blast protection?

Participants should be able to read site plans and building drawings and have some exposure to design reviews, facility operations or event planning. Bringing anonymised layouts of a site they know helps the walkthrough and design exercises reflect real conditions.

How does a physical security design course differ from a security management or CCTV design course?

It concentrates on the civil and architectural layer: stand-off, barriers, landscape, glazing and entry layouts decided at design stage. Security management courses cover guarding, policy and operations, and CCTV courses cover cameras, networks and video storage.

Why does hostile vehicle mitigation in physical security design start with a vehicle dynamics assessment?

The assessment shows the routes, run-up lengths and speeds a vehicle can reach before hitting the protective line. That sets the impact rating the barrier needs, so bollards are neither under-rated nor oversized and expensive.

What do participants take back from the physical security design course on CPTED, hostile vehicle mitigation and blast protection?

Participants take back a Protective Design Brief and HVM Layout for a case site, with a threat scenario list, CPTED review, vehicle dynamics plot, barrier selection, stand-off and glazing options and an integration note for electronic security.
