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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



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Germany

SECRETARY:

Mr Marco Peter

OF INTEREST TO THE FOLLOWING COMMITTEES:

PROPOSED HORIZONTAL STANDARD:



Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.

FUNCTIONS CONCERNED:

☐ EMC

☐ ENVIRONMENT

☐ QUALITY ASSURANCE

☐ SAFETY

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TITLE:

Information technology - Physical network security for the accommodation of customer premises cabling infrastructure and information technology equipment

NOTE FROM TC/SC OFFICERS:



Documents

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INFORMATION TECHNOLOGY –
Physical network security for the accommodation of customer premises cabling infrastructure and
information technology equipment

FOREWORD

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- This International Standard has been approved by vote of the member bodies, and the voting results can be obtained from the address given on the second title page.
- This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

INTRODUCTION

ISO/IEC 14763-2 specifies requirements and recommendations for the installation specification, quality assurance and installation practices for customer premises cabling in accordance with the ISO/IEC 11801 series.

Those requirements provide basic level of physical network security for the cabling and associated infrastructure.

This document builds upon the requirements of ISO/IEC 14763-2 by facilitating the timely and effective protection of the customer premises cabling infrastructure to avoid loss/damage to the physical information transport network and therefore supports the protection of the transmitted information.

This document provides comprehensive planning and installation requirements for improving physical network security.

The requirements and recommendations can be applied to existing buildings and also during building construction, or renovation, when actions are significantly less expensive and less disruptive than after the building is occupied.

This document incorporates the use of automated infrastructure management (AIM) systems, including those in accordance with ISO/IEC 18598, to further enhance the security of cabling infrastructure and integrate the physical network security with other security systems in the premises.

This document is intended to be used by

- architects, building owners, building designers and builders,
- consultants,
- facility managers and network managers,
- designers, suppliers, installers, inspectors (auditors), maintainers and owners of telecommunications cabling.

When using this standard, it shall be considered relevant specifications from ISO/IEC 27000 series.

INFORMATION TECHNOLOGY -
Generic cabling – Physical network security for the accommodation of
customer premises cabling infrastructure and information technology
equipment

1 Scope

This document specifies requirements and recommendations providing security to the physical network comprising customer premises cabling in accordance with ISO/IEC 11801 series, associated infrastructure and accommodation of information technology equipment.

The document covers the security of the telecommunications cables, pathways, spaces, and other infrastructure components of the telecommunications physical infrastructure to protect the telecommunications infrastructure from theft, vandalism, intrusions, and unauthorized modifications.

The document addresses

- a) risk assessment guidelines,
- b) design (including construction), planning and installation practices based on a required information sensitivity level,
- c) intrusion detection,
- d) administration including Automated Infrastructure Management (AIM).

This document applies to existing buildings and structures together with those being planned for construction.

The following are outside the scope of this document:

- 1) data protection methods such as encryption,
- 2) practices that address protection from non-contact cable tapping, audio, visual or RF snooping and other forms of unauthorized monitoring.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60839 *Alarm and electronic security systems*

IEC 60839-11-1 *Alarm and electronic security systems - Part 11-1: Electronic access control systems - System and components requirements*

IEC 62676-1-1:2013, *Video surveillance systems for use in security applications – Part 1-1: System requirements – General*

ISO/IEC 14763-2, *Information technology - Implementation and operation of customer premises cabling - Part 2: Planning and installation*

ISO/IEC 27000 *Information security management systems*

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this document the terms and definitions of ISO/IEC 14763-2 and the following apply.

3.1.1

access control system

system that provides selective restriction of access to a space or cabling component

3.1.2

administration

methodology defining the documentation requirements of a cabling system and its containment, the labelling of functional elements and the process by which moves, additions and changes are recorded [SOURCE: ISO/IEC 11801-1:2017, 3.1.1]

3.1.3

AIM system

integrated hardware and software system that automatically detects the insertion or removal of cords, documents the cabling infrastructure including connected equipment enabling management of the infrastructure and data exchange with other systems [SOURCE: ISO/IEC 18598:2016, 3.1.3]

3.1.4

alarmed carrier

system for detecting intrusion into a pathway using optical fibre as a vibration sensor

3.1.5

alarm-enabled

capable of triggering an alarm with the intrusion alarm system

3.1.6

authorized personnel

persons able to access a space or pathway of a defined Security Grade

3.1.7

cabling

system of telecommunications cables, cords and connecting hardware that supports the connection of information technology equipment [SOURCE: ISO/IEC 11801-1:2017, 3.1.21]

3.1.8

common distribution space

primary or secondary building distribution space

3.1.9

countermeasure

step taken to prevent a threat triggering a security event

3.1.10

dialler unit

device that communicates with external monitoring or response entities to report exceptions to pre-programmed conditions via a specific telephone number, set of telephone numbers or a network connection.

3.1.11

door hardware

metallic fixtures that enable opening, closing, and locking a door

3.1.12

electronic locking mechanism

device that allows access following receipt of digital or analogue information indicating an appropriate authorisation status of the person entering the information

3.1.13**effective height of a free-standing barrier**

shortest distance between any point on the top of the permanent part of the free-standing barrier (excluding any toppings) and the surface of the supporting ground when measured in the plane of the barrier

3.1.14**external boundary**

physical barrier(s) demarcating a space or structure of a given Security Grade (SG)

Note 1 to entry: Access floors and suspended ceilings through which unauthorised access to a space can be gained are not considered to be external boundaries. In such cases, the fixed building fabric upon which these structures are built is the external boundary.

3.1.15**external telecommunications cabinet**

outdoor enclosure accommodating telecommunications equipment and associated cabling

3.1.16**free-standing barrier**

wall, fence, gate, turnstile or other similar self-supporting barrier, and its associated foundations, designed to prevent entry to a space of a given Security Grade

3.1.17**inspectable**

able to be easily observed for tampering or damage without tools other than a light

3.1.18**inspectable area**

vertical and horizontal area from the outside of a sensitive facility in which a threat can be identified and removed

3.1.19**intelligent building system**

equipment and telecommunication infrastructure that supports monitoring, control, operation and management of building services

3.1.20**keypad**

manual input devices, typically requiring telecommunications connectivity, that allow individuals to enter specific codes to arm, disarm or diagnose intrusion systems

3.1.21**joint closures**

sealed housing protecting the joining or splicing of the conductors and optical fibres of telecommunications cables

3.1.22**junction box**

protective housing and associated space that enables cables to be routed between pathway systems

3.1.23**mechanical locking mechanism**

device that allows access by means of physically coded key or tool

3.1.24**protected pathway system**

conduit, hardened raceway, hardened optical fibre cable, and other means of physically restricting the access to telecommunications cables

3.1.25**security event**

vulnerability that has been exploited by a threat

3.1.26

surveillance system

devices and mechanisms used to monitor and detect behaviour or activity to protect the physical network

3.1.27

tamper evident

designed or enabled to show access or attempts to access

3.1.28

terminal equipment

equipment at an outlet used to access information provided by transmission equipment

[SOURCE: ISO/IEC 11801-1:2017, 3.1.81]

3.1.29

terminal equipment outlet

fixed connecting device which provides an interface to the terminal equipment

[SOURCE: ISO/IEC 11801-1:2017, 3.1.80, modified - Note 1 to entry deleted]

3.1.30

threat

method by which a vulnerability can be exploited to create a security event

3.1.31

topping

construction, added to the top of a free-standing barrier, and designed to be an effective intruder deterrent or for a decorative display of security

3.1.32

transmission equipment

active equipment used to distribute information from distributors to other distributors and to outlets

[SOURCE: ISO/IEC 11801-1:2017, 3.1.84]

3.1.33

uninspectable area

vertical and horizontal area from the outside of a sensitive facility in which a threat cannot be identified and removed

3.1.34

volumetric detector

intrusion sensor used to detect an unauthorized person in a confined space when the space is normally unoccupied

Note 1 to entry: Examples are ultrasonic, microwave and infrared sensors.

3.1.35

vulnerability

weakness that can be potentially exploited by a threat

3.2 Abbreviations

For the purposes of this document the abbreviations of ISO/IEC 14763-2 and the following apply.

CMS cable management system

PPS protected pathway system

SG Security Grade

SL Security level

4 Conformance

For the physical network security of a telecommunications cabling infrastructure to conform to this document it shall conform, as a minimum, to the specification, planning, installation and installation requirements of ISO/IEC 14763-2. This provides a basic level of physical network security and addresses the minimum information sensitivity level denominated Open.

In order to provide increased levels of physical network security determined by a risk assessment, the requirements for higher information sensitivity levels restricted, secure or highly secure shall be met.

5 Principles

5.1 General

A cyber security strategy sets out an organization's guiding principles, objectives and priorities for cyber security and shall also cover an organization's threat environment, cyber security initiatives (an action plan), or investments the organization plans to make as part of its cyber security program.

Without a cyber security strategy, organizations risk failing to adequately plan for and manage security and business risks within their organization.

Organizations can protect their systems and information from cyber threats. These security principles are grouped into four key activities: govern, protect, detect and respond.

- a) **Govern:** Identifying and managing security risks.
- b) **Protect:** Implementing security controls to reduce security risks.
- c) **Detect:** Detecting and understanding security events.
- d) **Respond:** Responding to and recovering from cyber security incident.

This document provides requirements and recommendations to protect and enhance the security, resiliency, and reliability of the organization's communications infrastructure.

5.2 Relationship with ISO/IEC 27000 series

The ISO/IEC 27000 series is a series of 46 individual standards that assist organizations improving their cyber information security; ISMS (information security management system). The ISMS is a systematic approach to risk management, containing measures that address the three pillars of information security: people, processes and technology.

ISO/IEC 24383 provides direction on security controls and treatments around information technology cabling, pathways and spaces for customer premises. These measures are not discussed in ISO/IEC 27000 series. ISO/IEC 24383 has been prepared so that it dovetails into ISMS, addressing cyber infrastructure security, to provide organizations with a complete, effective end-to-end cyber security implementation.

5.3 Risk assessment concepts

5.3.1 General

ISO/IEC 24383 does not address risk assessment techniques or any form of analysis. The organization is responsible to determine the cyber security risks that it faces.

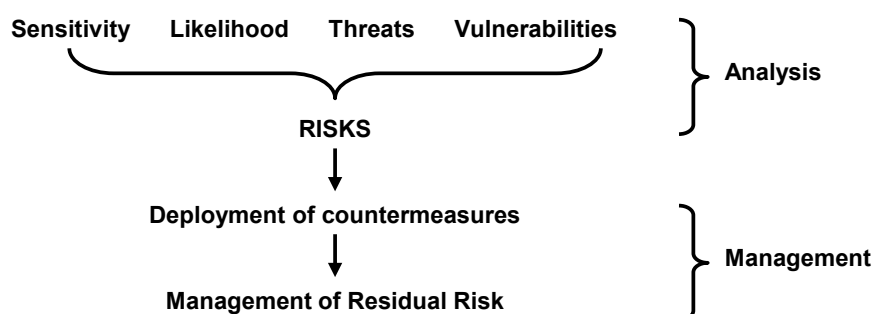


Figure 1 – Risk assessment concepts

This document defines four levels of information sensitivity, and the controls and treatments for those defined sensitivity levels.

The organization can determine that they require additional classifications of information sensitivity levels. These additional levels will not impact on the controls or treatments defined in this document. The organization can expand on the treatments and controls discussed in this standard.

5.3.2 Information sensitivity levels

The four levels of information sensitivity (classification) are:

a) Open: unauthorized disclosure, alteration or destruction of that information would result in little or no risk to the organization. This information includes but is not limited to information that is publicly available and organization-wide internal information that is only protected with limited controls. Installation practices for this and higher security levels must meet the minimum installation requirements specified in ISO/IEC 14763-2.

1) The security treatments and controls for information technology cabling, pathways and spaces for open (cyber) classification in a “public accessible area” and an organization’s general “working” area are the same. There are many circumstances where a physical barrier does not exist. Distinction between these “open” spaces is only made when the organization is locating the equipment room and applying equipment room specific security. Restricted: unauthorized disclosure, alteration or destruction of that information could result in a moderate level of risk to the organization. This information includes but is not limited to sensitive customer, pricing, employee, and other confidential information that could strongly-negatively affect the organization.

b) Highly sensitive – requires a secure facility: unauthorized disclosure, alteration or destruction of that information could cause a significant level of risk to the organization. If disclosed, there would be a significant financial or legal impact to the business. Restricted information is highly sensitive and typically protected with a non-disclosure agreement (NDA) to minimize legal risk. It includes but is not limited to trade secrets, potentially identifiable information (PII), cardholder data (credit cards), or HR and health information.

1) Critically sensitive – requires a Highly secure facility: unauthorized disclosure, alteration or destruction of that information could cause a catastrophic level of risk to the organization and stakeholders / partners. This information includes but is not limited to technology of significant value to the organization that are likely targets of espionage. It also includes critical infrastructure command and control systems.

To comply a security level, all requirements from that level and lower-level requirements shall be fulfilled.

5.4 Defence in depth

5.4.1 General

Defence in depth is a strategy used in Information (cyber) security in which multiple layers of security controls are layered in order to protect valuable data and information. ISO/IEC 24383 would form part of a larger ISMS (ISO/IEC 27000 series) cyber security defence in depth strategy.

ISO/IEC 24383 takes a systematic approach when applying security treatments and control to information technology cabling, pathways and spaces for customer premises. The defence in depth is a strategy undertaken is as follows:

- a) Public perimeter,
- b) Organizational perimeter,
- c) Equipment/distributor room,
- d) Rack/cabinet,
- e) Cabling component containment,
- f) Cabling component.

The application of defence-in-depth for the protection of IT cabling systems and the cyber information moving across the IT cabling, is enhanced using successive layers of physical security. All layers are designed to limit access to people without the appropriate authorisation to access systems at a facility.

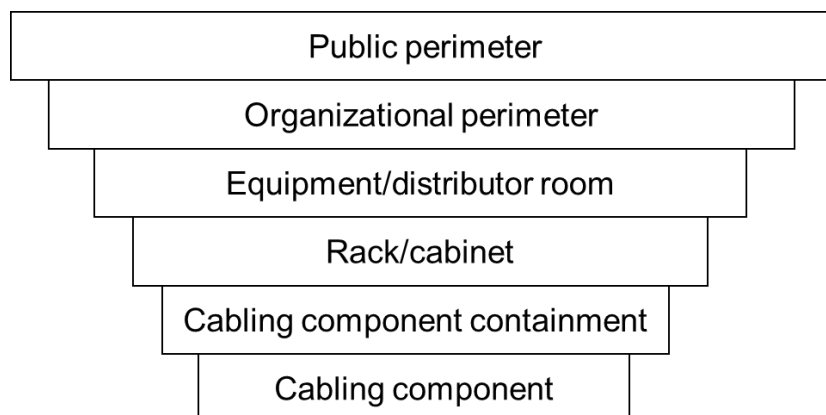


Figure 2 – Defence in depth model

5.4.2 Public perimeter

The first layer in the protection of information technology cabling, pathways and spaces is the line demarcating the boundary between the public accessible areas and the organizational side.

The line demarcating the extent between the public accessible areas and the organizational side is often a physical barrier (visible or non-visible). This physical barrier is dependent on the organization and the facility. This demarcation could be:

- a) Buried sensing cables and motion detectors around the site.
- b) A security rated fence and commensurately rated portals around the site.
- c) Access control doors (mechanical or electronic) from a public foyer or waiting area.
- d) Access control doors (mechanical or electronic) from a public open area (e.g. parks, gardens, and the like).

Access points within the demarcation line provides a means of organization personnel (people or vehicles) on entering/exiting between public area and the organization area.

5.4.3 Organizational perimeter

The second layer in the protection of information technology cabling, pathways and spaces is the line demarcation between the internal boundary between the various classified areas within the organization facility. These various classified areas can be:

- a) Open,
- b) Restricted,
- c) Secure,
- d) Highly secure.

Only the (cyber) information of that classification or lower, can be created, disclosed, altered or destroyed in that classification of area.

As an example, Restricted Network (RN) telecommunications outlets and workstations can appear in the Restricted Area (RA) and in the Secure Area (SA). Secure Area (SA) telecommunications outlets and workstations are prohibited to appear in either the Restricted Area (RA) or the Open Area (OA).

It is feasible for an organization to have two separate Restricted networks, each one existing solely and independently within a restricted area. As an example, Restricted Network 1 (RN1) can only have telecommunications outlets and workstations in Restricted Area 1 (RA1); likewise, Restricted Network 2 (RN2) telecommunications outlets and workstations can only appear Restricted Area 2 (RA2) and are prohibited in Restricted Area 1 (RA1), and vice versa.

5.4.4 Equipment/distributor room

The third layer in the protection of information technology cabling, pathways and spaces systems is the equipment rooms and distributor rooms. Within ISO/IEC 24383 all these rooms and spaces will be referred as the Equipment/distributor room (ER).

The security treatments and access for the equipment room housing the various classified (open, restricted, secure, highly secure) network cabling and/or equipment will differ.

The equipment room shall be classified to the highest level of the network rack/cabinet present in the room. There is a solution for the facility that houses a HSER, without a secure area. This is not recommended and is the only solution of existing facilities, with limited capability to be upgraded only.

After the equipment room has been classified, the equipment room shall be located in an area that is at a maximum of one classification level less than the equipment room. Where equipment rooms are placed in an area that is at a lower classification than the equipment room, additional security treatments shall be applied.

Table 1 – Equipment room classification and minimum area classification

Network rack/cabinet present	Equipment room classification	Minimum area classification
Open network (ON)	Open ER (OER)	Open area (public space)
Restricted network (RN)	Restricted ER (RER)	Open area (organization space)
Secure network (SN)	Secure ER (SER)	Restricted area
Highly secure network (HSN)	Highly secure ER (HSER)	Restricted Area (Secure area recommended)

5.4.5 Rack/cabinet

The fourth layer in the protection of information technology cabling, pathways and spaces systems is the equipment rack/cabinet.

The equipment rack shall be classified to the highest level of the (classified) network present in the rack/cabinet.

The security treatments and access for the equipment racks/cabinets that are classified either open, restricted, secure, highly secure will differ.

5.4.6 Cabling component containment

The fifth layer in the protection of information technology cabling, pathways and spaces systems is cabling component containment.

The cabling containment and the associated security treatments and controls shall match the classification of the network (information technology) cabling within.

5.4.7 Cabling component

The sixth layer in the protection of information technology cabling, pathways and spaces systems is the cabling component (cable, cord or connecting hardware).

The security treatments and controls for the cable, cords and outlets and the like shall match the classification of the network (information technology) information that is being transported over the cabling component.

5.5 Network infrastructure

While physical security can provide a degree of protection to information communicated over network infrastructure. It is recommended that all the network and cabling infrastructure be located in the areas authorised for the processing of such information.

5.6 Controlling access

Physical security controls are implemented to protect network devices and cabling, especially those in public areas, from physical damage or unauthorised access.

Risk assessed physical protection shall be provided for all network devices and cabling, especially those in public areas, to prevent an adversary physically damaging a network device with the intention of interrupting services. The physical protection shall be fit for the intended purpose.

Physical access to network devices can allow an adversary to reset devices to factory default settings by pressing a physical reset button, connecting a serial interface to a device or connecting directly to a device to bypass any access controls.

Resetting a network device to factory default settings can:

- a) Disable security settings including authentication and encryption functions.
- b) Reset administrator accounts and passwords to known defaults.
- c) If access to a network device is not gained, a likely denial of service attack could occur.

Physical access to network devices can be restricted through methods such as physical enclosures that prevent:

- 1) Access to console ports and factory reset buttons.
- 2) Mounting devices on ceilings or behind walls.
- 3) Placing devices in locked rooms or cabinets.

5.7 Physical access to cabling should be minimized to avoid threats. Perimeters and spaces

5.7.1 General

This clause discusses the relationship between areas of various classifications, and equipment rooms of various classifications. This clause outlines the requirements and recommendations for perimeter security and access control at the demarcation line between the internal boundary between the various classified areas within the organization facility.

5.7.2 Area and room relationships

5.7.2.1 General

The location of the various classified areas and equipment rooms will differ from organization to organization. Even within an organization, the purpose and layout of facilities will differ.

Figure 3, Figure 4 and Figure 5 do not encompass all cyber infrastructure classification installation solutions. Their purpose is to demonstrate the relationship and logic on the placement of:

a) Areas of various classification that house telecommunications outlets and workstations.

b) Placement of equipment rooms of various classifications.

5.7.2.2 Example: solution one

In this example there are four separate classified areas: open, restricted, secure and highly secure. The information technology security philosophy behind the example in Figure 3 is as follows:

An open area contains only open elements. A restricted area may contain both open and restricted elements. Each security level may not contain higher secure elements, but it may contain less secure elements.

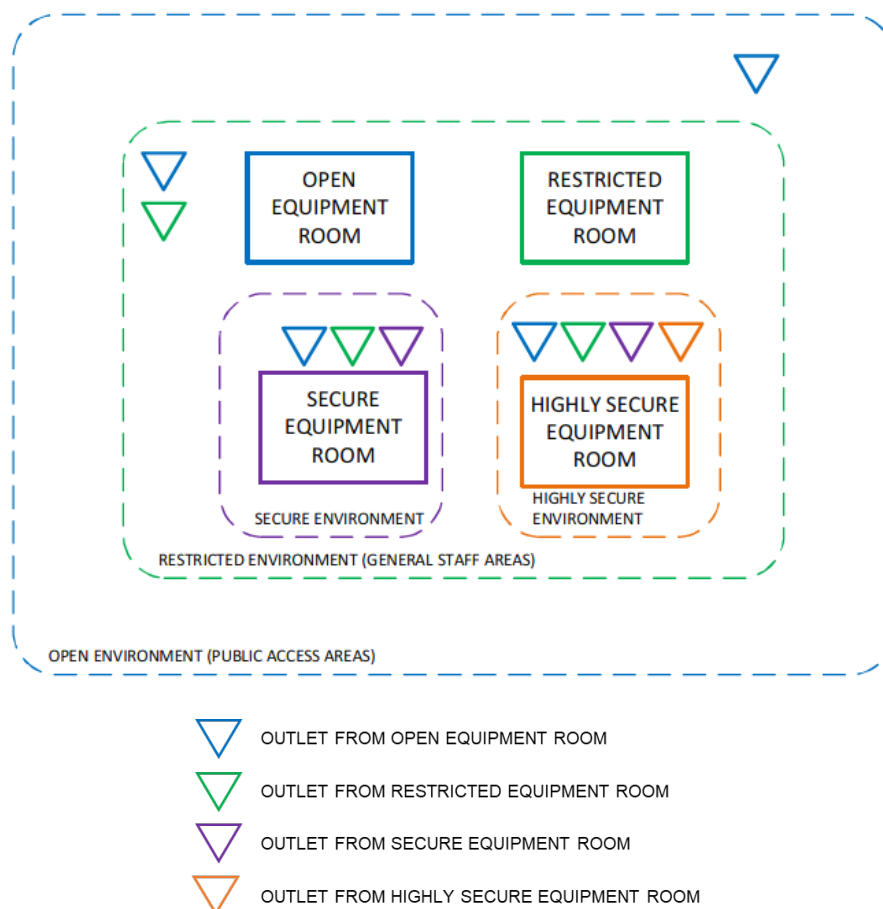


Figure 3 – Area and room relationship – solution one

5.7.2.3 Example: solution two

In this example there are four separate classified areas; open, restricted, secure and highly secure. The information technology security philosophy behind the example in Figure 4 is as follows:

a) In the open area “Open network (ON)” telecommunications outlets and workstations are located. In this situation, the organizational “Open ER (OER)” is directly accessible from a public space. This OER will require additional security treatments and controls equivalent to a Restricted ER (RER). Due to the location “Restricted network (RN)”, “Secure network (SN)” and “Highly secure network (HSN)” racks/cubicles are prohibited.

NOTE: In this situation, a Restricted area was built around the OER.

b) In the restricted area, “Open network (ON)” and “Restricted network (RN)” telecommunications outlets and workstations are located. There are two separate

equipment room; a Restricted ER (RER) and a Secure ER (SER). The Restricted ER needs additional treatments.

- c) In the secure area, “Open network (ON)”, “Restricted network (RN)” and “Secure network (SN)” telecommunications outlets and workstations are located. There is one separate equipment room; Highly secure ER (HSER). The Highly Secure ER needs additional treatments.
- d) In the highly secure area, “Open network (ON)”, “Restricted network (RN)”, “Secure network (SN)” and “Highly secure network (HSN)” telecommunications outlets and workstations are located.

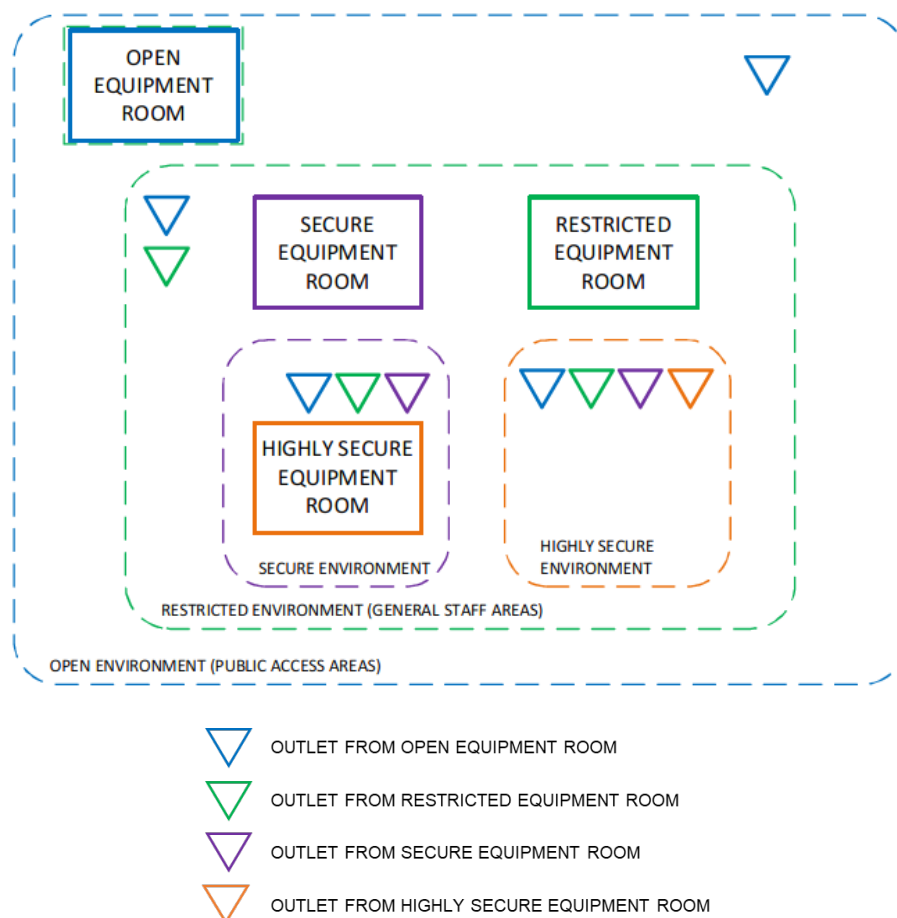


Figure 4 – Area and room relationship – solution two

5.7.2.4 Example: solution three

In this example there are four separate classified areas; open, restricted, secure and highly secure. The information technology security philosophy behind the example in Figure 5 is as follows:

- a) In the open area “Open network (ON)” telecommunications outlets and workstations are located. In this situation, the organizational “Open ER (OER)” is directly accessible from a public space. This OER will require additional security treatments and controls equivalent to a Restricted ER (RER). Due to the location “Restricted network (RN)”, “Secure network (SN)” and “Highly secure network (HSN)” racks/cubicles are prohibited.

NOTE: In this situation, a Restricted area was built around the OER.

- b) In the restricted area, “Open network (ON)” and “Restricted network (RN)” telecommunications outlets and workstations are located. Due to constraints, there are three separate equipment rooms; a Restricted ER (RER), a Secure ER (SER) and a Highly secure ER (HSER). The SER and HSER will require additional security treatments and

controls equivalent to a Secure ER (RER) – in essence, a secure area is being built around the HSER to bring it into line with the recommendations of Table 1. This is absolutely the lowest classified area that a HSER shall be found.

- c) In the secure area, “Open network (ON)”, “Restricted network (RN)” and “Secure network (SN)” telecommunications outlets and workstations are located.
- d) In the highly secure area, “Open network (ON)”, “Restricted network (RN)”, “Secure network (SN)” and “Highly secure network (HSN)” telecommunications outlets and workstations are located.

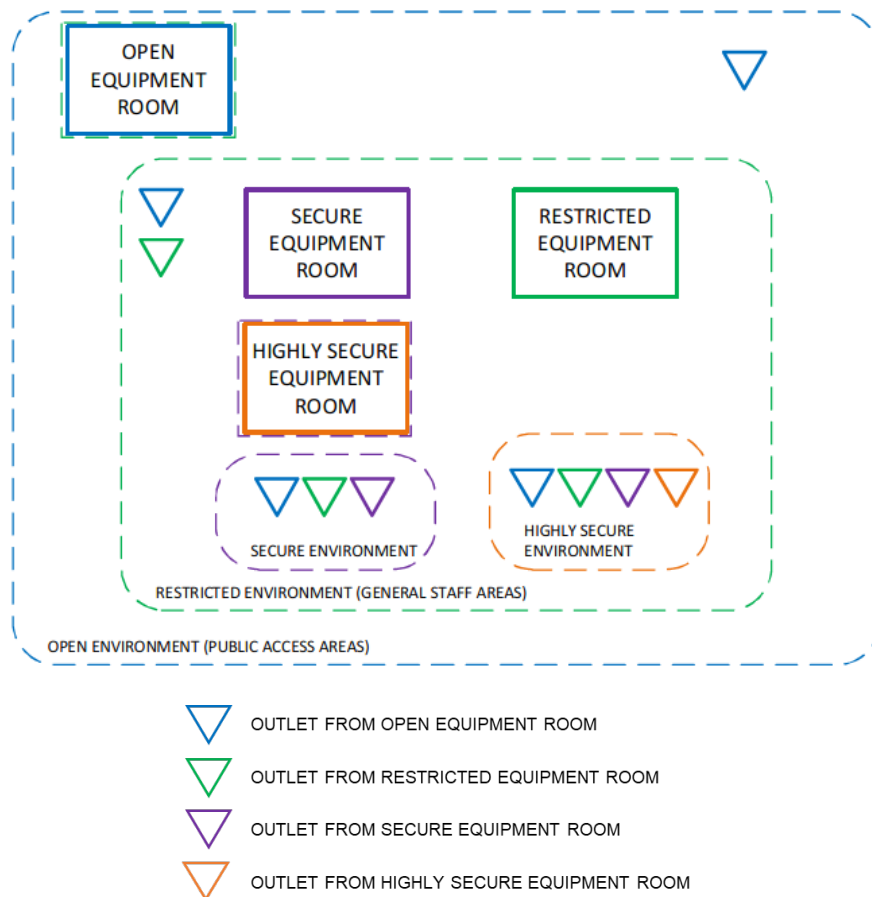


Figure 5 – Area and room relationship – solution three

5.7.3 Unauthorized observation

The inside of facilities without sufficient perimeter security are often exposed to observation through windows by unauthorized people.

Ensuring systems and information are not visible through windows will assist in reducing this security risk. This can be achieved by using blinds or curtains on windows. Soft or non-resonating window covering can prevent laser monitoring.

5.7.4 Security treatments and controls

The purpose of the security treatment and controls is to:

- a) Control and restrict access to various classified telecommunications outlets and workstations.
- b) Control and restrict access to various classified networks.
- c) Provide a demarcation line between the internal boundary between the various classified areas within the organization facility.

These required security treatment and controls shall apply these principles:

- 1) Deter – ensure that significant difficulty for adversaries to defeat, based on the classification.
- 2) Detect – identify unauthorised actions to gain access.
- 3) Delay – impede an adversary during attempted entry.
- 4) Respond – resist or mitigate the attack or event when it is detected.
- 5) Recover – restore operations to normal levels following an event.

All these area layers are designed to limit access to people without the appropriate authorisation to access systems at a facility.

5.8 Threat

Although risk is mostly defined by security classification level, area construction and protection measures will vary by and need to conform to the threat for the specific location. A low threat location (host country government compound, military base, etc.) should have lower protection requirements than a high threat location (commercial building in adversary country, etc.). The threat level shall be determined prior to selection of protection criteria.

Threat is related to inspectable space and is reduced where there is sufficient space around the secure facility to limit attacker access. The level of security higher where there is a large space around the facility other than where the facility is in a building or area having other possible adversaries nearby as in an office building.

The following levels of security (SL) have increasing recommended inspectable space around the facility, see also Table X.

SL1: Basic low level of security where access is limited.

SL2: Medium level of security requiring moderate but not extreme security measures to limit access and detect penetration.

SL3: High level of security requiring extra strong security measures to protect against access and immediately detect and address penetration

Requirements for lower security levels also apply to the higher levels, for example restricted locations shall also meet the requirement of open locations.

Table X - Title

SECURITY LEVEL TABLE		< 20 m inspectable space	20 m to 100 m inspectable space	> 100 m Inspectable Space
Low Threat	Low Sensitivity	SL2	SL1	SL1
	Medium Sensitivity	SL2	SL1	SL1
	High Sensitivity	SL2-3	SL2	SL1
Medium Threat	Low Sensitivity	SL2	SL2	SL1
	Medium Sensitivity	SL3	SL2-3	SL1
	High Sensitivity	SL3	SL3	SL2
High Threat	Low Sensitivity	SL3	SL2	SL1
	Medium Sensitivity	SL3	SL3	SL2
	High Sensitivity	SL3+	SL3	SL2

6 Public perimeter

6.1 General

The public perimeter is the area where the public has access but can be a threat. Public perimeter shall be inspectable to limit threats. The following levels of security have increasing recommended inspectable space around the facility.

6.2 Spaces and structures

6.2.1 Access control

6.2.1.1 Requirements

6.2.1.1.1 Open

Closable and lockable entry doors are required.

6.2.1.1.2 Restricted

6.2.1.1.3 Secure

6.2.1.1.4 Highly secure

6.2.1.2 Recommendations

6.2.1.2.1 Open

6.2.1.2.2 Restricted

6.2.1.2.3 Secure

Public perimeter for secure facilities should have fencing at the boundary or the outside area with lockable gates for after-hours use.

6.2.1.2.4 Highly secure

Public perimeter for highly secure facilities should have fencing at the boundary or the outside area with lockable gates for after-hours use. Perimeter lighting and CCTV monitoring to a security position or facility, or periodic guard patrols should be considered.

6.2.2 Intrusion resistance

6.2.2.1 Requirements

6.2.2.1.1 Open

6.2.2.1.2 Restricted

6.2.2.1.3 Secure

6.2.2.1.4 Highly secure

6.2.2.2 Recommendations

6.2.2.2.1 Open

6.2.2.2.2 Restricted

6.2.2.2.3 Secure

6.2.2.2.4 Highly secure

6.2.3 Monitoring

6.2.3.1 Requirements

6.2.3.1.1 Open

6.2.3.1.2 Restricted

6.2.3.1.3 Secure

Provide a minimum of 25 m of inspectable area around the secure facility or provide a method to provide adequate security.

714 **6.2.3.1.4 Highly secure**

715 Provide a minimum of 100 m of inspectable area around the secure facility or provide a method
716 to provide adequate security.

717 **6.2.3.2 Recommendations**

718 **6.2.3.2.1 Open**

719 **6.2.3.2.2 Restricted**

720 **6.2.3.2.3 Secure**

721 **6.2.3.2.4 Highly secure**

722 **6.3 Pathways**

723 **6.3.1 Access control**

724 **6.3.1.1 Requirements**

725 **6.3.1.1.1 Open**

726 All cabling and devices shall be enclosed or armoured to resist physical damage and limit easy
727 access, with breakouts and access points secured with locks.

728 **6.3.1.1.2 Restricted**

729 All cabling and devices shall be in level 1 protected pathway system with breakouts and access
730 points secured with security padlocks.

731 **6.3.1.1.3 Secure**

732 All cabling and devices shall be in level 2 protected pathway system with breakouts and access
733 points secured with security padlocks.

734 **6.3.1.1.4 Highly secure**

735 All cabling and devices shall be in level 2 protected pathway system with breakouts and access
736 points alarmed, CCTV monitored, and secured with security padlocks.

737 **6.3.1.2 Recommendations**

738 **6.3.1.2.1 Open**

739 **6.3.1.2.2 Restricted**

740 **6.3.1.2.3 Secure**

741 **6.3.1.2.4 Highly secure**

742 **6.3.2 Intrusion resistance**

743 **6.3.2.1 Requirements**

744 **6.3.2.1.1 Open**

745 **6.3.2.1.2 Restricted**

746 **6.3.2.1.3 Secure**

747 **6.3.2.1.4 Highly secure**

748 **6.3.2.2 Recommendations**

749 **6.3.2.2.1 Open**

750 **6.3.2.2.2 Restricted**

751 **6.3.2.2.3 Secure**

752 **6.3.2.2.4 Highly secure**

753 **6.3.3 Monitoring**

754 **6.3.3.1 Requirements**

- 755 **6.3.3.1.1 Open**
- 756 **6.3.3.1.2 Restricted**
- 757 Provide visual inspection by security or vetted personnel of protected pathway system runs at
758 least once a day.
- 759 **6.3.3.1.3 Secure**
- 760 Provide visual inspection by security or vetted personnel of protected pathway system runs at
761 least once a day. Inspect all Secure cable or distribution runs within secure facilities at least
762 every 90 days to check for tampering.
- 763 **6.3.3.1.4 Highly secure**
- 764 Provide visual inspection by security or vetted personnel of protected pathway system runs at
765 least once a day with CCTV monitoring of the runs to a 24/7 security centre or having on-site
766 guards unless imbedded in concrete or underground.
- 767 **6.3.3.2 Recommendations**
- 768 **6.3.3.2.1 Open**
- 769 **6.3.3.2.2 Restricted**
- 770 **6.3.3.2.3 Secure**
- 771 **6.3.3.2.4 Highly secure**
- 772 **6.4 Infrastructure components**
- 773 **6.4.1 Access control**
- 774 **6.4.1.1 Requirements**
- 775 **6.4.1.1.1 Open**
- 776 **6.4.1.1.2 Restricted**
- 777 **6.4.1.1.3 Secure**
- 778 **6.4.1.1.4 Highly secure**
- 779 **6.4.1.2 Recommendations**
- 780 **6.4.1.2.1 Open**
- 781 **6.4.1.2.2 Restricted**
- 782 **6.4.1.2.3 Secure**
- 783 **6.4.1.2.4 Highly secure**
- 784 **6.4.2 Intrusion resistance**
- 785 **6.4.2.1 Requirements**
- 786 **6.4.2.1.1 Open**
- 787 **6.4.2.1.2 Restricted**
- 788 **6.4.2.1.3 Secure**
- 789 **6.4.2.1.4 Highly secure**
- 790 **6.4.2.2 Recommendations**
- 791 **6.4.2.2.1 Open**
- 792 **6.4.2.2.2 Restricted**
- 793 **6.4.2.2.3 Secure**
- 794 **6.4.2.2.4 Highly secure**
- 795 **6.4.3 Monitoring**
- 796 **6.4.3.1 Requirements**