



## **SPECIFICATIONS & DRAWINGS**

In compiling our quotation, the following specifications and drawings have been used.

### **Specifications**

No formal CCTV specification is provided – our proposal is based on the marked up drawing listed below and the Tenant Change Request document 009

### **Drawings**

| <b><u>Drawing No</u></b> | <b><u>Revision</u></b> | <b><u>Date</u></b> |
|--------------------------|------------------------|--------------------|
| PA1338-E-301 Mark up     | C03                    | 02.09.19           |
| PA1338-E-302 Mark up     | C03                    | 02.09.19           |
| PA1338-E-303 Mark up     | C03                    | 02.09.19           |
| PA1338-E-304 Mark up     | C04                    | 29.10.19           |
| PA1338-E-305 Mark up     | C04                    | 29.10.19           |
| PA1338-E-306 Mark up     | C04                    | 29.10.19           |
| PA1338-E-307 Mark up     | C04                    | 29.10.19           |
| PA1338-E-308 Mark up     | C04                    | 29.10.19           |
| PA1338-E-309 Mark up     | C04                    | 29.10.19           |



## **COMPLIANCE STATEMENT**

Our quotation is compliant with the drawings and specifications as detailed above. Any deviations are listed below:

### **CCTV System**

1. The CCTV system is IP enabled and requires connecting to an IP Network provided by others. Network to include all copper and Fibre cabling, PoE Switches, switches, RJ45 connection units racking, patching and associated equipment.
2. All primary and secondary containment to be provided by others.
3. Off site monitoring to a RVRC is not included within our proposal. The Hikvision NVR is capable of being viewed from a RVRC using Immix software. We would be pleased to provide a quotation for remote monitoring when the actual requirements are known.

Typically:

Time Period of coverage – is it just o/o/h or all the time?

Number of cameras – will all the cameras require monitoring or only some of the cameras?

The above will generate additional questions.

4. We have not included for any management costs, commissioning or communication lines in relation to remote Monitoring.
5. We have not included for any external CCTV observation / cameras/ recording in line with the marked-up drawings provided



## **CLOSED CIRCUIT TELEVISION SYSTEM**

### **SYSTEM OVERVIEW**

Internal 1080p Static Dome cameras have been provided for the areas indicated on the marked-up drawing. The system offered is for day/night recording to a recommended light level of 0.4 lux monochrome and 2.0 lux for colour cameras. No additional lighting for the system has been provided.

Recording facilities will incorporate a network video recording unit offering 16Tb of storage for 62 days at 1080p resolution and 8fps.

The performance of a CCTV System is primarily dependent upon available light level.

In absence of a full site survey, we have detailed below each cameras minimum required lux level, please also refer to the table below showing typical light levels. If we are successful with our proposal, a Survey will be carried out prior to the installation and areas where lighting may need adjusting or adding will be identified at this stage.

The system is based on Hikvision manufacturer as indicated. The Hikvision system NVR has the facility to be monitored remotely via a remote video receiving centre running Immix control software. We have not included for any costs in relation to the remote monitoring of the CCTV system at this time, however when further information is provided, we would be pleased to advise and provide a revised quotation for this element

### **BASIS OF OUR QUOTATION**

Protec Fire Detection plc is a National Security Inspectorate (NSI) 'Gold' quality assured accredited Company for the provision of Intruder, CCTV and Access Control Systems.

### **APPROVAL STANDARDS**

The system offered will be provided in line with the following industry standard specifically NSI NCP 104 (Issue 2) – Code of Practice for the provision of CCTV Systems and Company Procedures for Security Systems.

Our quotation has been based on the following provided information:

### **DESIGN RESPONSIBILITY**

The level of CCTV coverage offered within this quotation has been determined by others and our quote is based upon supplied drawings and site dimensions appertaining to this Enquiry. The areas, which are equipped with CCTV coverage, are highlighted within the camera design specification section for your reference. No specific detail of rotakin requirements have been incorporated, due to their absence from the enquiry documentation.

**Please Note:** A Full Site Risk Assessment Report cannot be undertaken, if the works are estimated from a written layout enquiry only.



## EQUIPMENT SCHEDULE

|    |                                                           |
|----|-----------------------------------------------------------|
| 1  | CCTV-DVD EVIDENCE KIT                                     |
| 28 | 1080P STATIC DOME CAMERA FIXED FOCAL LENS (2.8MM/4MM/6MM) |
| 1  | I7 PC KEYBOARD MOUSE                                      |
| 1  | 21.5" LED MONITOR 1080P HD                                |
| 1  | 8TB 32CH 4HDD 4 SATA NVR                                  |

## CAMERA DESIGN SPECIFICATION

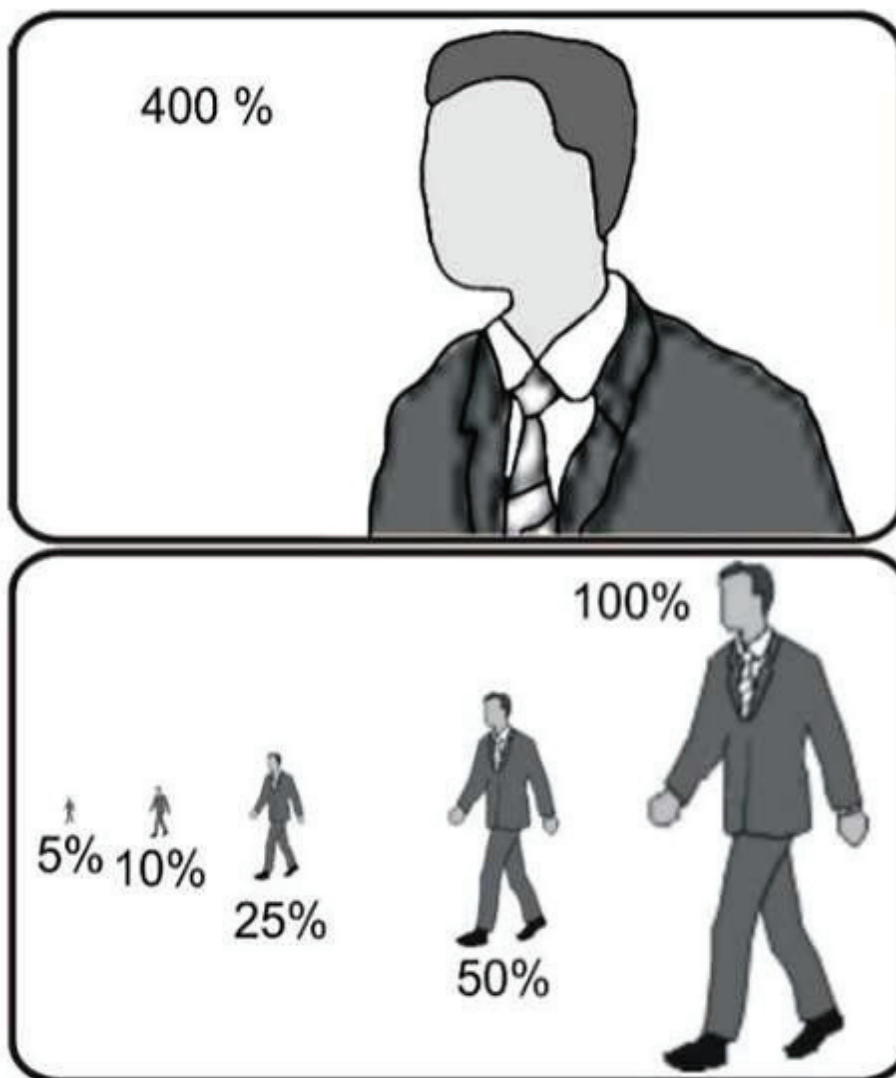
The Level of CCTV coverage has been detailed upon the drawings returned with our system quotation.

|                          |                                                                                 |
|--------------------------|---------------------------------------------------------------------------------|
| Type of System offered:  | Day/Night                                                                       |
| Control Equipment sited: | 1 <sup>st</sup> Floor Reception TBC                                             |
| Camera                   | 1-28                                                                            |
| Camera Type & Voltage:   | Internal 2Mp PoE                                                                |
| Function:                | Static views internal areas                                                     |
| Lens Type:               | 2.8/4mm/6mm fixed focal – lens to suit focal length/angle of view required      |
| Min Lux Level:           | Colour : 0.005 lux @ (F1.2, AGC ON), 0 lux with IR                              |
| Network Connection:      | To be provided by others with in 1m of camera location, unless agreed otherwise |

## Typical Light Levels

|                                           |            |                               |             |
|-------------------------------------------|------------|-------------------------------|-------------|
| Moonless, overcast night sky              | 0.0001 lux | Well lit main road            | 10 lux      |
| Moonless, clear (ie star light) night sky | 0.001 lux  | Stairs/Passages               | 60 lux      |
| Quarter moonlight on a cloudless sky      | 0.01 lux   | Offices/Retail Store Daylight | 250/500 lux |
| Deep twilight                             | 1 lux      | Full Sunlight                 | 10,000 lux  |
| Twilight                                  | 4 lux      |                               | 100,000 lux |

- To monitor the target shall represent not less than 5% of picture height (or more than 80mm per pixel).
- To detect the target shall represent not less than 10% of picture height (or more than 40mm per pixel).
- To observe the target shall represent 25% of picture height (or more than 16mm per pixel).
- To recognise the target shall represent not less than 50% of picture height (or more than 8mm per pixel).
- To identify the target shall represent not less than 100% of screen height (or more than 4mm per pixel).
- To inspect the target shall represent not less than 400% of screen height (or more than 1mm per pixel).



Since the influx of digital systems to the CCTV Market there is now variability in the capture, recording and display resolution. So, a “recognise” requirement can no longer be simply equated to a 50% screen height. For instance, though the use of megapixel cameras and high resolution displays it is now possible to provide the same image resolution as before using a smaller physical percentage on the screen.

Conversion Tables have therefore been devised to show how the traditional percentage screen height criteria for the mentioned PAL (576i) system will look under a range on non-PAL resolutions. 576i has an equivalent progressive scan vertical resolution of approximately 400 pixels (KELL Factor), this figure has been used in the Tables below. Table 1 shows the resolutions commonly encountered and Table 2 shows the equivalent screen heights needed to maintain the required resolution. These figures should be used only as a guideline to the proportion of the screen filled by the target as other factors also effect the available information in the image.



**Table 1 – Commonly encountered resolutions (in pixels)**

|        | PAL<br>(576i) | 1080p | 720p | WSVGA | SVGA | 4CIF<br>(576p) | VGA | 2CIF | CIF | QCIF |
|--------|---------------|-------|------|-------|------|----------------|-----|------|-----|------|
| Height | 400           | 1080  | 720  | 600   | 600  | 576            | 480 | 288  | 288 | 144  |
| Width  | 720           | 1920  | 1280 | 1024  | 800  | 704            | 640 | 704  | 352 | 176  |

**Table 2 – Person screen height equivalent for different digital resolutions (in percent)**

| Category  | PAL | 1080p | 720p | WSVGA | SVGA | 4CIF | VGA | 2CIF | CIF | QCIF |
|-----------|-----|-------|------|-------|------|------|-----|------|-----|------|
| Inspect   | 400 | 150   | 250  | 300   | 300  | 300  | 350 | 600  | 600 | 1200 |
| Identify  | 100 | 40    | 60   | 70    | 70   | 70   | 85  | 150  | 150 | 300  |
| Recognise | 50  | 20    | 30   | 35    | 35   | 35   | 45  | 70   | 70  | 150  |
| Observe   | 25  | 10    | 15   | 20    | 20   | 20   | 25  | 35   | 35  | 70   |
| Detect    | 10  | 10    | 10   | 10    | 10   | 10   | 10  | 15   | 15  | 30   |
| Monitor   | 5   | 5     | 5    | 5     | 5    | 5    | 5   | 10   | 10  | 15   |

## CLIENT RESPONSIBILITIES

It is the responsibility of the Client to provide adequate lighting throughout the areas covered with the proposed CCTV System. Specific camera requirements are detailed within the CCTV Equipment Schedule provided above.

The CCTV system is IP enabled and requires connecting to an IP Network provided by others. Network to include all copper and Fibre cabling, PoE Switches, switches, RJ45 connection units racking, patching and associated equipment

If our proposed cameras require a 240-volt AC Supply, this must be provided upon the same supply phase throughout the scheme. Failure to comply with this request will adversely affect the quality of the images received at the viewing/recording equipment.



We have not made allowances within our offer to supply brackets and consoles/shelving to house monitors or CCTV Control Equipment, however, should this be required, we would be pleased to offer advice and quote on these items when required.

Fully functional external cameras are provided with 'privacy zone' features, which prevent system operators from overlooking areas not covered by the proposed scheme. This is a mandatory requirement, as per the Data Protection Act 1998, and the CCTV Code of Practice 2008. A copy of this Code of Practice will form part of your Operating Instruction Manual.

Functionality of IP based systems is dependent on the required band width being available. It is also the responsibility of the end user to inform the Commissioner at the Headquarters of the Data Protection Act of the newly installed CCTV System upon acceptance. A minimum number of warning signs and an evidence kit have been included within our offer.

We would recommend that you obtain a copy of BS 7958 Management and Operation of CCTV. This document is available from the British Standard Institution of the National Security Inspectorate.

## **INSTALLATION TECHNIQUES**

The complete installation of the aforementioned Closed Circuit Television System will be carried out by Protec employed Electrical Engineers in liaison with a nominated representative of the client.

The CCTV system is IP enabled and requires connecting to an IP Network provided by others. Specialist Access Equipment to any high level works, if required, should be made available for Protec use.

## **COMMISSIONING AND SYSTEM DOCUMENTATION**

The Closed Circuit Television System offered will be commissioned and tested in line with current Company and NSI requirements prior to full system handover. All 240 VAC supplies and telephone/IT lines for remote signalling equipment (if applicable) are to be permanently energised/operational prior to the commencement of system commissioning. Delays as a result of this requirement may lead to additional costs being incurred.

A fully comprehensive Customer Manual will be issued upon job completion, which provides data for the CCTV System, detailing:

- System Specification
- Handover Checklist
- Circuit Test Readings
- NSI Certificate
- Operating and Maintenance Instructions
- Schedule of Equipment
- Log Record
- 'As Fitted' Layout Drawings

In addition to our Main Exclusions detailed within the General Section of this quotation, the following specific items relating to the CCTV System have been excluded from our offer:

- 240 Volt AC Supply to ALL cameras, PSU's and recording equipment.
- Provision of ducting to remote buildings (if applicable).
- All telecommunication lines and IT Networks for remote signalling and remote diagnostic purposes.



## **GENERAL**

### **Installation**

Our quotation for the installation is based upon the following requirements unless stated otherwise in our quotation:

We will utilise all available and suitable ceiling voids, ducts, cable trays and trunkings. Should the specification identify requirements for containment/supports such as cable trays, trunking, primary and secondary containment, channels, drop rods and the like, these will be provided free of charge by the Client, for our wiring cables and equipment.

Where we utilise the client's containment systems for our cables it is the installer's responsibility to ensure the containment and fixings are installed to meet the requirements of regulation 521.11.201 of the current IET wiring regulations.

PVC mini-trunking may be used to encase cables where appropriate at Protec's discretion.

### **Secondary Containment**

Unless stated within the 'Option Cost' pricing schedule, Secondary Containment has not been included, we would be pleased to offer a cost. In order to accurately assess the requirements, please issue a set of your primary containment drawings to Protec.

All cable terminations will be carried out in accordance with manufacturers' recommendations.

With reference to the 230V primary supplies, we have assumed that suitable circuits in compliance with the current IET wiring regulations are to be provided at no cost to Protec.

This quotation excludes the following:

- All builders' works, except for the drilling of holes up to 35mm.
- All chasing out, fire stopping, making good and re-decoration of walls.
- It is not our policy to undertake non licensed, notifiable non licensed or licensed works on asbestos containing materials. If asbestos is identified prior to or during our installation works it will be the clients' responsibility to make the area safe for the installation works to proceed. Additional costs may be incurred for installation works carried out adjacent to areas containing asbestos.
- The disposal of any redundant hazardous equipment. Special arrangement will need to be taken by the Client.
- The removal and replacement of fixtures and fittings, including furniture, carpets and client stock. Where we have included for the removal of existing redundant equipment, existing cabling will be removed from visible open areas only.
- Electrical power and lighting.
- Site welfare, storage and administration facilities.



The customer is responsible for ensuring that the quantities, types of devices, colour etc. are correct and for giving Protec any necessary information including all relevant up to date drawings and specifications etc. within sufficient time to enable Protec to perform the works required.

Delivery of custom-made items will be up to 6 to 8 weeks from receipt of your written order being acknowledged by ourselves. The delivery date is dependent upon design approval, stock availability and the programmed work at the time the order is acknowledged.

Our quotation is based upon the works being carried out during normal working hours and on a continual basis (Monday to Friday – 8.00am to 5.00pm)

We have assumed that the site does not have an M&E Major Projects Agreement.

Please note that we cannot guarantee the battery prices and other bought in products within this quotation due to the uncertainty within the world wide battery market at present.

The prices are nett and are exclusive of VAT. This quotation remains valid for a period of 30 days or until the Company announces or applies any price changes, whichever, may be the sooner, or unless you have been advised in writing of any other arrangements.

Please note this quotation has been provided in accordance with Protec Terms and Conditions of sale and supply available at [www.protec.co.uk](http://www.protec.co.uk).

Please note our quotations do not include main contractor discount.

### Design

Should we state in our quotation that we are design responsible in line with the appropriate standards for that system, we will require full consultation with all relevant interested parties such as the user or purchaser, building control, local fire officers, mechanical and electrical consultants and fire engineering consultants. We assume we have already received full information of any reports, drawings, fire risk assessment etc., previously prepared by these parties and that all information is listed in our quotation. We reserve the right to adjust our costs should we later be advised of information not previously listed by us that will affect our system design.

### REDCARE ULTIMATE

Please be aware should we have offered Dual Communication REDCARE ULTIMATE within our quotation, it is offered prior to a signal strength test being undertaken. The purpose of the test is to ensure the location and final site location of the transmitter is conducive to full and correct signaling operation. If suitable signal strength is not available, we reserve the right to provide an alternative signaling format, where available. All associated telephone line installation costs and rental charges are excluded from our quotation.