



# SAFEGUARD SYSTEMS



**Safeguard Systems**  
Monitored Security Systems for Solar Sites

# INTRODUCTION

## Who are Safeguard Systems?

### History of the Business

Safeguard Systems were formed with a clear objective in mind; to provide organisations with expert security systems, designed to deter and reduce the impact of crime.

Prior to forming Safeguard Systems, both directors encountered too many organisations where security was an afterthought, had invested in systems that were designed incorrectly and not properly maintained.

With over 30 years of combined security systems experience, Safeguard Systems is dedicated to quality of service and technical expertise. This led to the business focusing on projects where, an investment in security was a critical factor in business continuity and operational success.

Over the last 4 years, Safeguard Systems has worked continuously on solar projects, across 120 solar sites. The team has delivered projects from build stage, through to maintaining, replacing, and decommissioning legacy systems.

Safeguard Systems' team of experienced security engineers understand the threats posed to solar and renewable energy sites, and excel in providing ongoing support to critical infrastructure projects across the UK.

### Director Bio's

#### Chris Clifton

Chris is an experienced, security professional with an exceptional level of technical expertise. Chris's core skills include, project design, delivering on SLAs and understanding highly complex, security system requirements. Outside of the business, Chris enjoys skiing, travel and has a keen interest in property development.

#### Steve Blackwell

Steve has a strong background in project delivery and technical know-how. When it comes to critical infrastructure projects, come rain or shine, you will find Steve delivering monitored CCTV, alarms and perimeter protection systems on solar sites, all over the UK. Steve recently become a father, and spends his time outside of work with family and raising the new member of the Safeguard Systems team.



Experts in monitored security systems



Over 30 years collective security industry experience



Targeted focus on critical infrastructure projects



Expert partners of global security systems manufacturers

# MONITORED SECURITY SYSTEMS

## Protecting Solar Sites from the Impact of Crime

Having delivered numerous security systems on solar farms over the past few years, the team at Safeguard Systems is well versed in the security challenges the solar industry faces.

When approaching a new solar farm project, sites are assessed on an individual basis, risk assessments carried out, with project briefs and all security considerations identified and signed off.

After an initial consultation and planning process, Safeguard Systems work closely with renewable energy O&M & EPC clients in designing a robust, tailored, monitored security system.



### Monitored CCTV

Theft on solar sites is increasing, creating operational challenges within the industry. Therefore, it is essential critical infrastructure projects are secured to the highest standards. Monitored CCTV systems ensure solar sites are protected 24/7 by a team of experienced security professionals, helping to reduce crime.



### Perimeter Protection

Safeguard Systems integrate high definition IP day & night CCTV cameras with infra-red and thermal imaging, ensuring large solar farm perimeters are secured and monitored 24/7.

Due to the rural location of many solar farms, the solutions Safeguard Systems implement are set to differentiate between alerts caused by wildlife, and those that could indicate criminal intent, reducing false alarms and security costs.



### Monitored Alarms

To ensure a fully integrated approach to solar site security, Safeguard Systems implement alarm systems that work seamlessly alongside monitored CCTV and perimeter protection solutions.

In the event of an alarm triggering, the CCTV cameras can be set to pan, tilt and zoom, allowing the Alarm Receiving Centre to take the necessary action.

## Key Facts



120 solar sites attended and faults rectified



40 failing security systems decommissioned and replaced with full security system upgrades



Working in partnership with 5 Solar O&M companies



15 Years' experience with monitored security systems



4 years working almost exclusively on solar security systems



# MONITORED SOLAR SITE SECURITY PROJECTS

To protect energy supplies and revenue across renewable energy sites, Safeguard Systems' bespoke security solutions provide extensive coverage, ensuring cost-effective protection for high-value equipment.

Safeguard Systems' processes ensure effective project delivery whilst adhering to regulatory compliance and satisfying local planning authorities with respect for the environment and other regulations.



Before



After



## Our Accreditations



## Our Partners



# CASE STUDY

## Remotely Monitored CCTV



### Project Background

Safeguard Systems were invited by a global Solar PV provider to carry out a site assessment on an existing remotely monitored CCTV system.

The client had been experiencing several concerns with the functionality of the system, including poor image quality and mains supply issues.

Safeguard Systems were asked to provide a detailed report on the general operational capability, and condition of the current security camera system.



### Project Delivery

The client was provided with detailed risk assessments, method statements and the assurance Safeguard Systems were conforming to all Health and Safety requirements, with all industry accreditations in place.

A comprehensive survey of the security system showed a lack of cable segregation, low density analogue camera images and poorly designed 240-volt supply systems.

Safeguard Systems designed and installed a new robust, HD IP CCTV system including:

- Fully segregated cables, eliminating interference
- Improved image quality and higher capacity 240-volt cables which eliminated the mains supply issues
- A new Hikvision Server with integrated advanced human body detection analytics software helping to reduce false alarm activations to the alarm receiving centre
- A fully monitored security system, fit-for-purpose and aligned to the client's requirements



### Project Outcome

Upon completion of the upgrade, the system:

- Produces clear and defined HD images, transmit alarms to Alarm Receiving Centre for visual verification
- Functions efficiently with no further mains supply issues
- Provides complete security and peace of mind for the client
- Reduces the potential for costly security breaches and criminal activity



# CASE STUDY

## Solar Site in Wales



### Project Background

Safeguard Systems received a detailed brief from a solar site operator to design and install a monitored perimeter security system on a large solar farm.

This solar site is one of the largest in the UK, with the overall site perimeter approximately 8.2KM, and operates across 4 separate fields.

Upon a comprehensive survey, the issues encountered were:

- The perimeter alarm wire was broken in over 150 places
- There were no entry/exit sounders on the gates to prompt operators to unset the system on entry
- All four existing gate contacts were corroded, functioning incorrectly and all gate keypads showed signs of interference
- The 8.2KM perimeter was split into a small number of intruder zones. This made each perimeter zone section vast, and pinpointing break-ins a very time-consuming exercise
- The site had 4 separate entry gates, each with an alarm keypad to set/unset the system on entry. However, all four keypad enclosures were corroded and showed signs of interference

### Project Delivery

After inspecting the site, and uncovering all security issues with the current alarm system, Safeguard Systems designed a robust, effective perimeter security system. The recommended solution would split the site into 4 separate defined systems, one system for each of the four fields. The benefits to this approach were:

- The area of the site being visited can be exclusively unset/disarmed, therefore the other areas remain set/armed and secured
- Logging of personnel and site visitors can be tracked to certain areas/fields of the site
- Pinpointing perimeter breaks and system activations is a much simpler and quicker process
- New communication units could be fitted to each system, allowing for SIA format of communication. This enables the monitoring station to see individual zone activations, isolations, faults, and more providing more clarity on the alarms received
- IP modules were fitted to each system allowing remote engineers to upload/download (UDL), enabling Safeguard Systems' engineers to diagnose faults remotely, and isolate them temporarily to keep the system operational until an engineer can attend

### Project Outcome

The timescale originally proposed was four weeks for two engineers.

To ensure prompt, project delivery Safeguard Systems allocated five engineers to the project and implemented the system within two weeks.

The client now has a fully functioning perimeter alarm system, fit for purpose and protecting their valuable assets and revenue.

# CASE STUDY

## Perimeter Security System and Monitored CCTV Installation Solar Site in Wales



### Project Background

Safeguard Systems were approached by a leading solar O&M provider to complete a security system assessment on a solar site in South Wales. This was following reports of the security system functioning incorrectly.

The security system in place was a remotely monitored CCTV system consisting of 28 cameras and four CCTV servers. The site was split across two separate fields.

Field one having 15 Cameras and Field two having 13 Cameras.



### Project Delivery

Safeguard Systems had a team of technicians attend the site and complete a full assessment. Upon review, Safeguard Systems' team of engineers found a multitude of issues:

- It was apparent the Security System was in an incredibly poor state with only two of the four CCTV servers functioning and only six of the 28 cameras working
- Most cameras were not functioning due to cable damage across the site
- The CCTV cabinet was incredibly disorganised displaying poor workmanship
- Mains AC cabling and low voltage cabling had been run in together within the ducting



Due to the number of irreparable issues, the only way to move forward was for Safeguard Systems to implement a full system upgrade.

Following the acceptance of the quotation, Safeguard Systems returned to site in April 2020 to commence installation of the upgraded perimeter security System.

In delivering this project, Safeguard Systems:

- Upgraded all 28 Cameras from analogue to IP, improving image quality and overall effectiveness
- Re-cabled the entire site with more robust steel wire armoured cabling and upgraded the existing faulty CCTV recorders with advanced analytics servers



### Project Outcome

The new system provides high definition video footage and a far superior footage retention period allowing the customer to review footage as far back as 3 months. This system is connected to a central monitoring station which provides the site with 24/7 monitoring.

The installation was installed on time and to budget, fixing all legacy issues created during the original installation. The new robust installation delivers vastly improved security reducing the risk of costly criminal activity.



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