

Sub Station - Case Study



Sub-Station Case Study

Trial Date:
16.07.08

Location:
Nottinghamshire

About FM

FM Electronics are a UK based manufacturer and supplier of wireless alarm technology. Established in 1989 FM have identified new opportunities in the UK police and public markets gaining valuable partners who have helped to build FM into its current form.

We pride ourselves on our in house development team, ongoing software enhancement and experience in shaping bespoke solutions to fit difficult security requirements.

'FM have maintained a Helpful and friendly contact throughout these trials which have proved to be highly valuable. Since trials started we have eliminated unauthorised access to the sub-station compound entirely. I was alerted to a cable theft in progress which was attended by my staff and BTP as a direct result of the SMS alert provided to me by this system'

M. P.
Distribution

This Field Study is from a 2008 / 2009 trial ran in cooperation with the distribution department of Network Rail.

Sub Station Security

FM Security were made aware of problems at various network rail Sub-Station sites during 2008. These problems involved the repeated Theft or Attempted Theft of valuable copper cable, earthing strip and damage from forced entry into Sub-Station buildings and compounds. Also reported was the repeated theft of copper wire and strip from Sub-Station sites currently under construction in various electric rail expansion projects.

Targeting compounds causes serious damage to transformers, temporary shut down and ultimately train minute delays. Equipment and cable is expensive to replace and the unauthorised access is potentially life threatening to the thieves and employees.

Test Site History

- 13 break ins 1st half 2008
- Copper earthing stolen from transformers resulting in serious damage and fire within the Sub-Station compound
- Inner building broken into and damage caused
- Site left unsecure (locks broken / fences damaged)
- Transformers out of commission for over 10 months
- Sub-Station out of use for 6 months causing supply problems to the WCML

Repeat raids on the same sites have resulted in continued damage and the loss of large, high value assets.

Requirements

To address the above problems we must:

- Provide early detection of unauthorised compound entry
- Report detailed location and alarm information
- Provide the report in an accessible format
- Enable staff to be dispatched to site immediately
- Invoke preventative action rather than reconstructive remedial work
- Maintain effective protection through system management and maintenance
- Deter entry using Effective signage

Manufactured and designed by



FM32224



Case Study - Cont'd



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FM Security

FMS are a sister company to FM Electronics who deal with the installation and in-field servicing of alarm equipment. Their main areas of operation are building site's and empty or void property.

Uses

- Compounds
- Storage Yards
- Metal Roofs
- Sub-Station
- Warehouses
- Cable protection
- Temporary alarm

Test Site

Challenge

External installations require bespoke solutions. Through our on going product development and experience in the supply and maintenance of police and public authorities alarm systems, FM provide effective proven external security into the most demanding of sectors. FM were able to alter hardware and software to meet the requirements of the sub-station environment whilst maintaining the flexibility of use inherent in the equipment. A key element in this is the close contact of manufacturer and installer which allows products to be tailored specifically. What resulted was a successful application of the alarm equipment into a NWR Sub-Station environment.

Test site from above



Installation

FM supplied and fitted alarm equipment at the test site to provide alerts to NWR staff when any unauthorised access to the compound was detected. The installation was achieved and the initial trials began on the 16th July 2008. There were a number of operational problems which were recognised as a regular part of an install in a challenging environment. Thanks to FM's experience with similar demanding site installations these problems were soon ironed out and the system has been performing well since September 2008.

Inside the compound



Results

NWR now have a reliable alarm system which has been effective in reducing and detecting unauthorised entry to the site.



Line Guard receiver



Communication via SMS on GSM networks wherever such networks exist.



Twin Eye external motion detector

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Manufactured and designed by

