

50 BANK STREET MAKES AN INVESTMENT IN GENT LIFE SAFETY TECHNOLOGY

London's Canary Wharf comprises some of world's most sought after office, leisure and retail space. One of its most recognisable buildings is 50 Bank Street, which now benefits from cutting edge life safety solutions from Honeywell Gent, installed by Pacific Fire & Security.

Case Study





Just over 30 years ago Canary Wharf was a semi-desolate former docklands on London's Isle of Dogs. Then, in 1987, a plan was hatched to build 97 acres of office, leisure and retail space there and in the intervening years much has changed. Inhabiting the 37 completed buildings sited there are some of the world's greatest companies, with over 120,000 people working in the area every day.

Home Sweet Home

50 Bank Street is an 11-storey 20,000m² office building originally completed in 2002. Located in the heart of Canary Wharf on the southern side of Jubilee Park and in close proximity to the main underground station.

'The building's fire detection, voice alarm and public address and voice alarm (VA/PA) systems had been in-situ since it was first constructed and were coming to the end of their working lives,' explains Andrew Young, Senior Building Manager at M J Mapp, specialists in property and asset management. 'I made the decision to upgrade to a more modern system that offered advanced features and benefits that have been integrated into the latest fire safety

technology. In addition, I wanted to move away from a closed protocol resulting in a wholesale replacement of the system.'

One of the companies invited to submit its proposals was London and Kent based Pacific Fire & Security. Operations Director, Kirk Short, takes up the story and says, 'It was clear from the early stages that this would be a highly complex project but exactly the type of challenge that our highly qualified engineers relish. I knew we had the skills and experience to achieve all of Andrew's objectives and, furthermore, being a Gent Approved Systems Integrator gave us access to some of the best life safety technology on the market today.'

Winner Takes All

Andrew Young was impressed with Pacific's approach and subsequently awarded it the contract following a tender process. The company's primary brief was to replace antiquated fire system control panels, associated fire detection devices and distributed VA/PA racks within an occupied, operational building.

Achieving this required meticulous planning, as all the work had to be completed 'out of hours' and during the day there could be no disruption to the working life of the building's occupants. Furthermore, the very best project management was required to ensure the client and building users had a continually operational fire detection system. Pacific also had to retain the functional capabilities of the building's control centre, as well as maintain bespoke building management controls that contained automatic cause and effects. This all had to be incorporated within an existing site annunciator control panel.

Asked to explain the features of an annunciator panel, Kirk replies, 'It is a purpose built control panel that is unique to a particular location and based on a two dimensional map of the building. It usually features light emitting diode (LED) lights that, in an alarm event, indicate where a problem started, what caused it and which devices are active.

Some of the information relayed by it helps people exit the building safely, prevent the fire service from receiving false or unwanted alarms and provide notification about any device failures. The annunciator panel at 50 Bank Street also enables full control and indication of smoke dampers, extract fans, lift controls and manual control of phased evacuation messages. Andrew wanted to keep it as part of the new system and this was a major challenge.'

Voice of Reason

After a month of site visits, inspections and tests, Pacific began work on what was to become a three month long project. To ensure that all deadlines were met, Kirk and his team configured a program of works that detailed each phase, with all defined works completed prior to building operation the next working day. This meant liaising with Andrew on a daily basis to explain what had been achieved the night before and what would be completed during the subsequent shift. To cover all eventualities, engineers from Pacific were also placed on standby to provide a fast response if there were problems during normal working hours, however, they were never called into action.

Pacific decided that it would replace the entire VA/PA system first and Kirk says, 'The VA/PA system is programmed to form part of a phased evacuation strategy at 50 Bank Street. It was important to have a system that communicates a range of messages clearly, unambiguously, and can manage complicated evacuation strategies in the event of an emergency. The EN52-16 certified Honeywell Gent D1 VA/PA system combines advanced audio management with a flexible architecture and having installed many of these systems previously, we knew it would be up to the job. Although installing the new two rack VA/PA system involved a lot of wiring and controls rebuilding work, the way that D1 is designed made the process less onerous than it could have otherwise been.'

In addition to the on-site works and preparation by Pacific Security, the VA/PA racks built at the Honeywell Gent production centre in Leicester were subject to full site cause and effect programming and Factory Acceptance Testing (FAT) witness by Pacific Security. In carrying out the FAT test with the Honeywell Gent Announcer facility in Leicester Pacific Security and Honeywell Gent were 100% confident of the site cause and effect being met and site annunciator change over being successful prior to the systems being shipped to site.

Panel Decision

The fire detection solution specified by Pacific is based around eight of Honeywell Gent's industry leading Vigilon control panels. Certified to EN54 parts 2 and 4, the Vigilon panel has a self-contained power supply and battery standby for at least 72 hours, and offers the latest in system flexibility and control panel aesthetics. Furthermore, its backlit LCD display presents clear indication of fire or fault location and the control panel's innovative character display with push button keypad is simple to use.

Gary Elson, Business Manager (London & South East) at Gent, comments, 'This was perhaps the most complicated project that I was involved with in 2017 and it needed solutions that could assist Kirk and his team in their highly defined objectives. Vigilon combines powerful software in the control panel and intelligent loop powered devices to deliver a flexible, easy to install and use system. Its modular concept makes systems simple to design and algorithms are used to match the pattern of activity in the sensor with data from test results stored in the panel memory. This has proven particularly useful at 50 Bank Street as all information can also be fed directly into the annunciator panel.'

The Vigilon based fire detection system is complemented by a large number of Gent S-Quad smoke and heat detectors, as well as sounders, which are located throughout the building. 'S-Quad was the first intelligent loop powered multifunctional device to include a sensor, sounder, speech and visual alarm,' comments Gary. 'Four separate sensing elements – heat, carbon monoxide, and dual angle optical forward and backward scatter – achieve local processing in the sensor and the panel and offer the best level of reliability and prevention of unwanted alarms.'

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Two's Company

The original life safety system was fully active during the installation of the new Gent equipment, with the two systems operating in tandem to give full coverage on all levels of the building. Having the two system operating at the same time was also necessary in order to carry out the unique and complex cause and effect programming.

This project involved interfacing parts of the fire detection system with the building management system (BMS). Kirk explains, 'There are three position key switches used for fans and smoke dampers that would normally be part of the BMS, but the extract fans dampers were all on the fire detection system. We configured the system so that when activated these all light up on the annunciator panel, which, in turn,

triggers the fire detection system. Eventually the plan is to fully integrate the fire detection system on to the BMS.'

When it came towards the end of the planned works, Gent created a miniature version of the annunciator panel so that, prior to swap over, Pacific and the consultant on the project, Willie Fraser, Consultant Engineer at KJ Tait, could pre-empt any issues. Fraser comments, 'I was thoroughly impressed with the way that all parties involved worked together to ensure that there was a seamless transition between the old system and the Gent technology. Everything was fully tested in advance and Gent really went above and beyond what was expected to make sure that this happened and the transition process went without a hitch.'

Mission Accomplished

Despite being a highly complex project, both technically and logistically, Pacific successfully delivered it within time, on budget and to the complete satisfaction of the client. Andrew at M J Mapp, concludes, 'Kirk and his team fulfilled the brief and carried out the work with a high level of professionalism. They caused minimal disruption, demonstrated a high level of skill and were very professional during the process. Although this was a demanding and extensive scope of works, having the Gent Vigilon and D1 systems in place gives me confidence that everyone in 50 Bank Street has the best possible fire safety technology in place.'

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GENCSBS | 05/2018
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