

THE CASE STUDY

Transforming urban living through security

Sunderland Housing Group (SHG) is a not for profit organisation that manages tenanted housing of over 36,000 homes, among which are 23 tower blocks - situated across Sunderland City. Originally built in the 60s, the towers had become rundown as a result of on-going vandalism, tenants being harassed and under occupancy.

In 2002, challenged with a situation to demolish or refurbish the towers, Sunderland Housing Group's chief executive Peter Walls took the least likely option and decided that the towers would be regenerated, and assigned considerable investment for the task. Peter Walls initiated sweeping changes with the desired outcome to massively improve the quality of living for tenants and the local community in the surrounding areas. His goal was to create accommodation that people aspired to live in; where they would take pride in their home, a place with a real sense of community. 23 of the 27 towers were selected for the refurbishment project that would take six years to complete.

SHG's resident policy states that tenants should be over 35 years of age, but in reality this is far exceeded, as most tenants are closer to 50 or 60 years of age or older. SHG needed to consider the needs of this age group, of which a main priority was to provide a safe and secure environment. In addition to the internal and external overhaul, the refurbishment plan required that each tower should have a modern security system connected to an on-site concierge; to reduce crime by keeping intruders out, to catch and prosecute vandals and trouble makers and give tenants peace of mind. Up to this time the towers did not have any specific security measures. The security equipment specified for the refurbishment included the following:

- External CCTV using Honeywell KD6 domes with PTZ, to monitor the car park area, access roads and perimeter of the building up to the main entrance.
- Access control at the vehicular and pedestrian entry gates and the main entrance of each tower using the Honeywell WIN-PAK system with proximity access control cards or key fobs.
- Internal CCTV – Honeywell fixed cameras fitted in the lobby, the lifts and in communal areas such as the living room and laundry room.
- Intruder alarms– using the Honeywell Galaxy/IntelliSense products for the communal areas on the ground floor and for the emergency exits.
- Bespoke video door entry – with modified CCTV camera and apartment monitors.
- Fire alarm system.
- On-site concierge control room to manage all security applications.
- The security system at each tower was required to be fully integrated.

Although tenants unanimously agreed the changes were much needed, some were rather sceptical, at the start of the project, that the refurbishment would make any difference. It was important to get their buy-in to agree to the changes, as tenants were required to vacate the buildings during the 11 months of refurbishment. A massive culture change was needed to convince residents about SHG's ambitious plans. Through a communication programme tenants were informed about what was going to happen and what the outcomes would be. Surveys were conducted with residents, including public consultation and the use of a mobile exhibition unit to show all the improvements that were being offered; at all times encouraging feedback from tenants and making adjustments accordingly.

The security element went out to tender through building services consulting engineers Davies Tindale who were responsible for managing the project. It was awarded to 2020 Vision Systems, who are specialists in systems integration and complex security projects. 2020 Vision System demonstrated how the initial

security tender document, proposed by SHG, could become even more effective - by installing a concierge control room, with the capability to manage the integrated security and 24-hour monitoring and control for all towers from one remote location. This would provide additional benefits of greater system control, and cost savings of reduced manpower and overhead costs. SHG considered this change in approach, but waited to see the outcome of the security system at the first tower block, before deciding on a central concierge system.

Zetland Tower was the first building to be refurbished. Located on the edge of the city centre, in the middle of a residential estate comprising of sheltered housing and with other towers within walking distance, Zetland Tower provided the test site; used to monitor the effectiveness of the on-site security concierge. The benefits of the integrated system resulted in a quick reduction in crime and vandalism. Within two weeks of the system going live there were two convictions, secured through video evidence recorded at Zetland and supplied to the police.

THE CONCIERGE SYSTEM

Sunderland Housing Group followed 2020 Vision Systems proposal and decided that having one main concierge control room managing the entire security function for every tower block would be the best approach. A bespoke concierge control room was installed at Leechmere, located within a six-mile radius of the towers. The security control centre at Leechmere was opened and fully operational in 2005.

The individual security systems from each tower are networked together using wireless IP communications over a secure LAN. Bandwidth is throttled to 1Mb broadband per link, providing high quality transmission of voice, video and data and fire alarm, simultaneously and in real time - to one user interface. Wireless IP has enabled considerable cost savings; compared to cable based systems, through amalgamating the concierge to one location, and through addition of newly refurbished towers.

The Honeywell Maxpro Max 1000 matrix and management system provides the front-end control for every security function. A major benefit of integration is that concierge operators are not required to have multiple skills to operate CCTV, access control and fire systems; they are simply trained to manage one front-end system. The Max 1000 enables different applications to 'talk' to each other in a holistic 'cause and effect' manner. For example, CCTV is watching from the moment a visitor approaches the building; say from the car park or approach roads. The person is captured on the CCTV at the door entry system at the main entrance - through the lobby, in the lift and up to the resident's door – as a fully automated process.

The integration of different applications makes it easier for the concierge operators to do their job. When a tenant arrives and swipes his access card, the system will automatically recognise him and release the door lock. However if a tenant has forgotten their access card they can call the concierge – who will recognise them and let them in. Every camera is recording on site and the operator can replay any recorded images over the network – should they need to investigate an incident. If someone exits through the fire door – the opening of the door will automatically activate the alarm system as well as internal and external CCTV to view the scene and record what's going on. These images are displayed in realtime to the concierge so that the appropriate action can be taken quickly.

Peter Walls comments: "The main reason for video surveillance is to provide safety for the welfare of residents, both in the blocks and neighbouring estates. The results are far reaching – in particular it offers peace of mind - someone is at the end of the phone 24/7."

THE VIDEO DOOR ENTRY AND MESSAGING SYSTEM

The door entry system from Compus Teltronic has been modified at the door station and each apartment. It houses a Honeywell CCTV camera that links directly to the control room at Leechmere. All calls are automatically recorded

both on-site and at the control room. The concierge manages the functionality of the door entry – whereby they can route calls directly to the tenant or via the control room to first intercept and then forward-on to the tenant. Within each apartment is a 4” TFT monitor installed beside the handset. This was customised by Honeywell, so that as well as displaying the image of the caller from the door entry, it can also provide images from any of the CCTV cameras (enabled by the concierge). The monitor can also receive and display SMS texting from the concierge, who can use this to leave a message for a tenant – for example to say that they missed a visitor when they were out.

ACCESS CONTROL AND RESIDENT CARE

The Honeywell WIN-PAK Access control system is installed at the main entrance. Doors remain locked and tenants gain access via a swipe or proximity card. Concierge operators constantly gather and use information from the access control system; for example – it will show if a tenant has not left their property for over a week – the concierge can call the tenant via the door entry system in their apartment to check if everything is ok or if they need any assistance. If there is no answer after several attempts the concierge will request support from SHG to check on the welfare of that person.

THE FIRE SYSTEM

The most common cause of false fire alarm activation occurs as a result of food being burned– often toast – which triggers the smoke detectors. Although a harmless enough accident, at a cost of £200 per call-out from the fire brigade, this is not only a waste of money, but a waste of the resources of the fire service who may be required to attend a real fire at the same time. The new fire alarm system allows a more responsible approach. The fire alarm is now routed in the first instance to the concierge who confirms the alarm status before activating the emergency evacuation procedures. The concierge identifies where the alarm is coming from, calls the apartment to check if there really is a fire – or uses the nearby CCTV to check for signs of a fire. If the tenant confirms a false alarm, the concierge simply resets the system – and none of the other tenants will have

been disturbed. If there is no response from the apartment the concierge operator will treat the alarm as genuine and will activate the fire alarm system to evacuate the building and call-out the emergency services.

FUTURE PROOFING

David Morton, Architect for Sunderland Housing Group comments: “The security system has developed from the initial specification, and the reason for going with 2020 Vision Systems was because they understood the technology to such an extent that they could offer future expansions to the system. The next step will be to use the money that would previously have been spent on repairs, cleaning up after vandals or trying to sort out tenant problems, on keeping the system up to date and continually evolving.”

Peter Houlis, managing director for 2020 Vision Systems comments: “Honeywell is our partner of choice because they are continuously developing products with backward compatibility that will protect the initial investment of the project and keep it working well into the future. It is a future proof platform on to which other technologies may be added.”

GOOD NEIGHBOURS

Vandalism and anti social behaviour are expensive problems; they eat away at the sense of community and make a person feel bad about the place they live in; knowing that others do not respect the building – or the people living there.

Sunderland Housing Group is considered a good neighbour to the residents in the low level housing between the tower blocks (provided by a different housing association) as they also benefit from the new security systems. Cleaning up the area has had a positive knock on effect in their areas too; their problems have also diminished.

The concierge facility can be expanded and will have the ability to add-on private developments in the future. David Morton explains: “We could even offer the concierge to other housing schemes. In the future we could expand from being a

service provider to being a revenue generating business, using the revenue to fund the next improvements for tenants.”

THE END RESULT

SHG were among the first to take this radical approach to their high rise accommodation. They lead the way with the benchmark for the best implementation of tower block housing regeneration in the UK. It is now being copied by other housing groups across the country. The philosophy has paid off. Such has been the overall success of the refurbishment that tenants are now actually applying to buy their apartments. The towers are fully occupied, which is a far cry from a few years earlier when no-one wanted to move in to them. They offer residents high quality spacious living, close to the city centre, with parking and a planted landscaped area. There is a communal room pleasantly furnished with TV, Video, stereo and PC's – and a separate laundry room for use by all tenants. Neither area is locked up.

Peter Walls regularly gives presentations to other housing groups to explain the approach – why they decided to regenerate towers when other housing groups/councils were knocking theirs down. David Morton concludes: “The security was well worth the effort for such a positive change; it went way beyond the expectations of Sunderland Housing Group”.

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