

Secure access in a nutshell

By **Adriaan Bosch, Astrosec.**

Acorn Creek is an estate designed to be secure.

The Helderberg Basin in the Western Cape has proven to be one of the busiest development nodes in South Africa. While the region used to be dominated by the freehold sector, this has changed to boast an impressive array of estates and sectional title developments.

In the next six years, more than 4500 will be developed in the area between the N2 and the R102 on a number of country estates. The area is proving to be a popular choice for those relocating from other parts of the country. As with the rest of South Africa, it has proven that the demand for properties in gated communities surpasses that of any other offering. Acorn Creek is one of the new developments in the area and MSP Developers will add more than 400 homes to the region.

Acorn challenges

In a CRIS case study conducted by K. Landman in 2004, it showed that the fear of crime and victimisation were the main drivers behind the massive upsurge in demand for property within gated communities. The most important reason given by the residents from all four areas in the study was a need for safety and security.

Ten years later in 2014, Landman conducted another case study together with Gregory Breetzke from the University of Canterbury in Christchurch, New Zealand, and Ellen G. Cohn of the Florida International University in Miami, USA. Among other things, the study demonstrated that gating does not necessarily prevent crimes such as burglary, but can in some instances even attract criminal behaviour, both during the day and during the night.

The concentration of greater wealth, architectural guidelines that limit the implementation of physical security measures and a lapse in basic security habits due to complacency prove to be a very attractive prize for opportunistic and even organised criminals. When implementing a security strategy around access control, with only one element of the security system missing or not adequate, may result in the system failing to prevent unauthorised intrusions.

Acorn actions

With their experience in developing estates of this nature, MSP Developments recognised the value of security and the cost saving of getting it done right the first time round. From the start of the Acorn Creek Project, the developer appointed two security companies to form part of the design



Acorn Creek entrance.

team. Security experts from Astrosec (independent monitoring and risk management specialist) and Fang Fences and Guards (security infrastructure specialists) were tasked to create a security solution that will effectively manage the estate's security risks.

The design methodology and approach was to understand the vision of MSP Developments as the developer of the estate and then evaluate all the risk factors in line with this vision. The first step was to do an in-depth risk assessment to assess the various risk factors and identify high-risk areas and weak spots. The perimeter security system was then designed to mitigate specific risks.

Apart from the physical risk factors identified in the risk assessment, the system design also factored in a number of 'non security' related issues including:

- Rapid rise in cost and risk associated with manned guarding solutions.
- Life span of technical systems incorporating depreciation of the systems and currency devaluation over the medium to long term.
- Future advances in security and home automation systems.
- Projected impact on the area by neighbouring estates and business nodes.
- Traffic and congestion during peak times including pedestrian traffic.
- Estate rules and regulations and the management thereof by the HOA.
- Phases in which the estate will be developed and the developers responsible for the estate infrastructure as well as individual homes on the estate.

With the main gate forming a pivotal role in the access control strategy, considerable time was spent in the design of the area to support the security function. A team of architects and urban planners from Dennis Moss Partnership together with estate risk management professionals from Astrosec visited a number of estates

in the Western Cape. The aim of the visits was to understand how the design of the main gate could support or undermine the security systems and procedures.

Instead of building a small house with two sets of booms the design was created to support access control procedures and the security of the estate. The architects from Dennis Moss created a design to support every function, from the registration of contractors to searching of staff on exit. Not only does this increase the security of the estate but improve flow of traffic and the general experience of all who visit the estate. Every detail went into the design of this truly holistic security system. Everything from conduit size, to wheelchair accesses and the location of the ablutions for the security guards.

Final result

The end result of the project was a hybrid design incorporating onsite systems and response, supported by off-site monitoring and disaster recovery. The perimeter security system will include an electrified fence supported by thermal cameras with embedded video analytics, both being monitored remotely.

Biometric access control, lockout gates and full height turnstiles will control the access points of the estate. The security system will be connected on a dedicated fibre backbone with backup power generation. A single systems integrator will ensure quality and accountability throughout the lifespan of the system.

The design allows for maximum security while keeping the amount of guards to a minimum and thus keeping the levy low over the long term. Acorn Creek will truly be an estate designed to be secure.

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