

## CASE STUDY

# Road Construction Site – Access Control with no barriers

Technology to maintain Roll Call and TimeSheet data, where no physical turnstiles can be installed.



Organisation:  
SafetyNet Security Group,  
Amey Construction

Location:  
Birmingham A38 Tunnels

Industry Segment:  
Construction / Road

Application:  
Access Control, Time &  
Attendance, H&S Compliance

Technology:  
Data Collection PDA,  
Biometrics, 3G, Finger Print

### The Problem

SafetyNet Security Group were asked to deploy security guards to control access and maintain staff safety on the Birmingham A38 Tunnels essential refurbishment works completed by Amey. This involved keeping track of the Amey workforce at all times, in all tunnels and plant rooms, regardless of entrance and exits used, in real-time in case of evacuation, all on live roadways, without the space to install turnstiles, phone lines or have any power. To add to this, there was also a remote compound and the roadway had to completely re-opened each day.

Every guard needed to be able to check people as they entered or left a tunnel, either by card or biometric. Each guard could, at any point, need to instigate an evacuation process and know who was unaccounted for.

While SafetyNet Security Group could supply a professional manned guarding team, they needed an electronic system to keep a track of the Amey workforce in real-time and identify who was allowed access from those who were not.

### The Solution

Using our advanced Access Control suite as a starting point (built specifically for the construction industry), we added a completely bespoke bolt-on module which allowed the use of toughened robust PDAs with biometrics built in, enabling the guards to use a completely portable 3G unit at each access point.

Using our suite as the foundation meant that all of the features which come as standard were still available, such as certification compliance, flexible and powerful TimeSheet (T&A) and onsite/offsite connectivity.

The success of the solution would be measured by its ease of use, speed, reliability and the harsh environment found working at the side of a live roadway and within underground tunnels.

The most key requirement was that if any guard triggered an evacuation process, all of the other guards needed to be alerted instantly of the emergency and could begin to “checkout” people as safe at their nearest escape route, even if that was not the same as the entrance they used, impossible with any paper-based or tick-board system.



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SECURITY GROUP



  
**BRUMTUNNELS**



*Implementing this solution demonstrated that SafetyNet Security Group, in partnership with Heronrange, could provide a solid and reliable solution for ensuring the safety and security of Amey's workforce.*

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Using Motorola MC75A PDAs with Biometric Attachment meant we could provide a robust terminal to exceed the challenges of the harsh environment. Running ASP.NET on WindowsMobile, Mobile SQL Server and with built in 3G and GPS capability meant we could also provide physical device tracking and real-time data which could also cope with occasional 3G black-spots.

We developed the application to run on the PDA and a back-end service to handle and control communications between the PDAs and the central server. The server could ensure the central database of people's location was accurate, and would then distribute this to all PDAs in the event of an evacuation. If one guard triggered this, the other PDAs would all go red and play a fire alarm sound before showing the guards a list of all unaccounted staff. As each person escaped past a guard, they would be

marked as safe, reducing the list until all people were accounted for, or display the name and location of those still missing.

We also enabled a feature where site visitors, who had to be escorted at all times, could be highlighted. When they were scanned on a PDA, the guard would be prompted to ensure the visitor was still being escorted.

During the entire construction project, they performed two real evacuations and eight drills. On each occasion SafetyNet Security Group could ensure they knew exactly who was safe and who was missing. Each PDA was also tracked using satellite GPS as a back-up.

