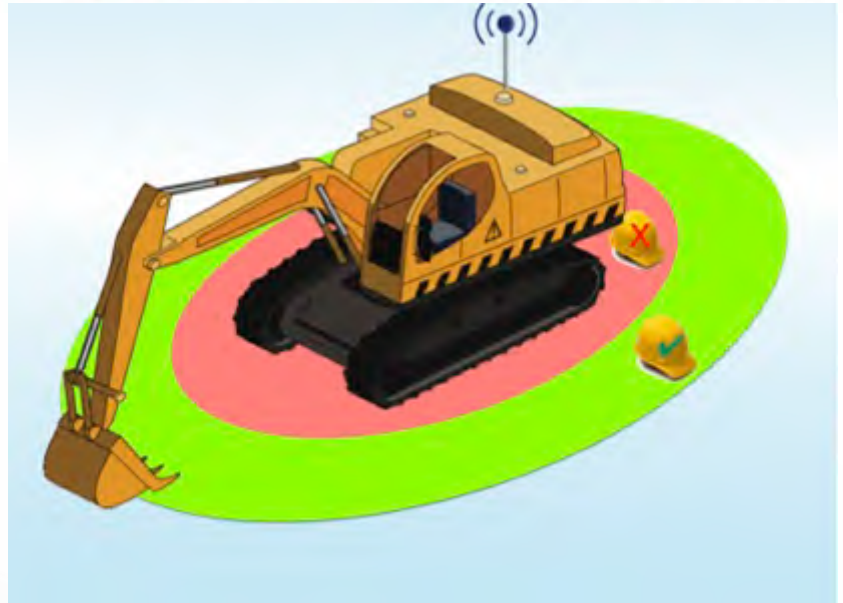


# SiteGuard

## SiteGuard Proximity Warning System

Modern work sites are busy places with multiple machines and personnel often squeezed into compact sites. Many accidents occur when personnel stray too close to a machine and especially into the blind spots that many machines have. When people and machines collide people always come off worse. SiteGuard is a proximity warning system that alerts the operator when personnel are in dangerous proximity to the machine.

SiteGuard is an active solution to this problem unlike passive systems such as cameras and mirrors that rely on operator attention at all times. Active RFID systems do not rely on line-of-sight and will detect personnel in spite of obstructions.



### Specification

- Ranges between 3m and 10m can be set
- Individual RFID Tag ID's
- Single or Dual Antenna Array
- Software Control of range
- Multi-Orientation Tag Detection
- Data Logging
- Optional Telemetry for Remote Monitoring
- Long-Life Batteries in Tags

### How SiteGuard Works

- The SiteGuard antenna uses radio frequency identification to produce a detection zone around a vehicle
- All personnel are issued with RFID tags
- When the RFID tag wearer enters the detection zone the vehicle operator is alerted that there is an intrusion into the danger zone and reacts appropriately. An optional warning may also be given to the roaming personnel
- Individual RFID Tag ID's for machines and personnel allow data-logging, helping to understand the behavioural profile of workers on site
- Optional GKD Telemetry allows for remote monitoring

## Application

SiteGuard PWS can be used wherever machines and people are in close proximity, sectors include:

**Construction** – Civil engineering and construction projects provide many dangers and high risks to personnel working around machinery due to limited space, multiple tasks being carried out in close proximity and many personnel being present on site.

**Logistics and Warehousing** – Forklift trucks operate in an often congested environment, are fast moving and can turn in an instant. The 360° visibility provided by SiteGuard in a warehouse or distribution environment, such as a depot, can be invaluable when reducing collisions between vehicles and personnel.

**Ports** – The use of heavy machinery in ports and dockyards provides another application for SiteGuard to ensure worker safety. Large mobile cranes and lift trucks operate in restricted space in and around large containers, throwing up multiple safety issues where workers and vehicle operators line-of-sight is affected.

**Quarries** – SiteGuard is naturally suited to the heavy machinery used in a quarries and aggregates environment, which are often of such a size that blind spots are a real threat to personnel safety. 80% of accidents occur as a vehicle moves off, so in the congested areas such as loading bays, packing plants and stock bays, poor line of site is not an issue due to SiteGuard technology.

**Waste Management Sites** – The proximity of workers to large mobile plant and heavy machinery on waste management and recycling sites is becoming more of an issue as this machinery is becoming more frequently used. The safety of workers in places such as landfill sites; waste transfer stations and recycling plants can greatly be improved with SiteGuard.

**Rail** – With GKD's experience in safety systems for the rail market, naturally this is an area where SiteGuard will prevail. Rail maintenance is dangerous at the best of times, the added security of SiteGuard can lower potential hazards, with personnel already having to think about live lines and oncoming traffic, it is one less worry.

## Further Possibilities

SiteGuard can be configured on request for other uses on work sites. The data logging and telemetry can be used by owners, management or foreman to better understand the behaviour of their workers on site, resulting in the continual implementation of safety management systems or protocol on site.

The system can use the individual tag ID's to identify which particular worker is operating the machine and provide a warning if an unauthorised worker is operating the vehicle.

SiteGuard can also provide access control services, identifying the tag or transponder ID and preventing or allowing access depending on the set status of that ID.