



## CASE STUDY

# AUTOMATIC GATE AT PRIMARY SCHOOL STAFF CAR PARK



**Setting:** Commercial (Education establishment)

**Type of Gate:** Double leaf swing gates constructed of steel box section and tube. Automated with 24-volt ram motors fitted at high level.

**Site Details:** Gates fitted at end of road / alley way leading to a small staff car park. Entrance is also used for deliveries etc. Gate Safe was asked by the Head Teacher to carry out an independent survey on the gate system as part of a school safety audit.

**Rationale for gates:** Automated gates were required to enhance car park security and to mitigate against unwanted access to school premises. The gates remain closed during school hours to ensure pupil safety.

## Case Study: Automatic gate at primary school staff car park

### Safety issues identified:

1. Risk of impact, trapping and crushing. Safety edges were only fitted horizontally to the bottom of the gate leaves on the inside of site. When tested, these edges only stopped the gates but did not revert. This represented a potential hazard since there was potential for a person to be pinned and trapped against the fence.
2. Risk of impact and crushing. No safety edges were fitted on the outside of the leaves horizontally or vertically to cover the reducing gap between the gates as they close.
3. Risk of impact and crushing. Only two hinges per leaf were fitted, with the top hinges inverted. In the event of one hinge failing, the leaves could easily fall. The weight of the leaves is supported only by the bottom hinges as the top ones are inverted, resulting in an even greater possibility of a gate failure.
4. Risk of trapping and crushing. Large gaps were identified at hinges (over 100mm) which reduced substantially when the gates were opened. There was no evident sign of protection in this area which is subject to massive forces. The intercom outstation was mounted to the outside on the hang stile and was only reachable from the wrong side of the gates potentially causing someone to be in the most dangerous area.
5. Risk of impact and crushing. No inside photocells were fitted to cover the arc of the gates.

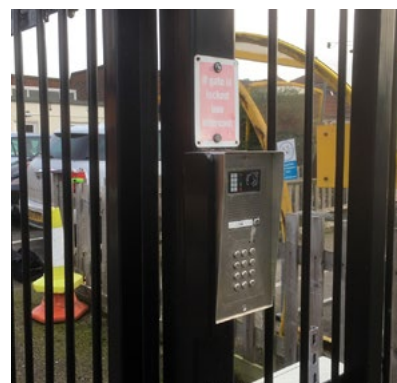
**Action taken:** All Gate Safe's comments were taken on board and subsequently, the recommended works for upgrading the system were put out to tender.



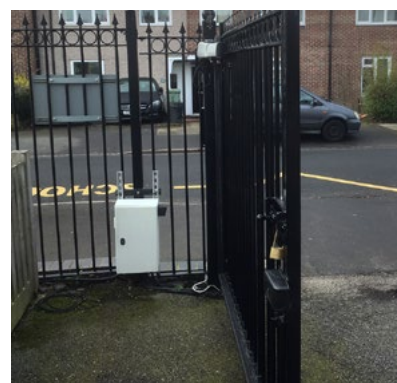
risk of gate crushing against a fence



inverted hinge



reducing gap at the hinge



gate features no inside photocells