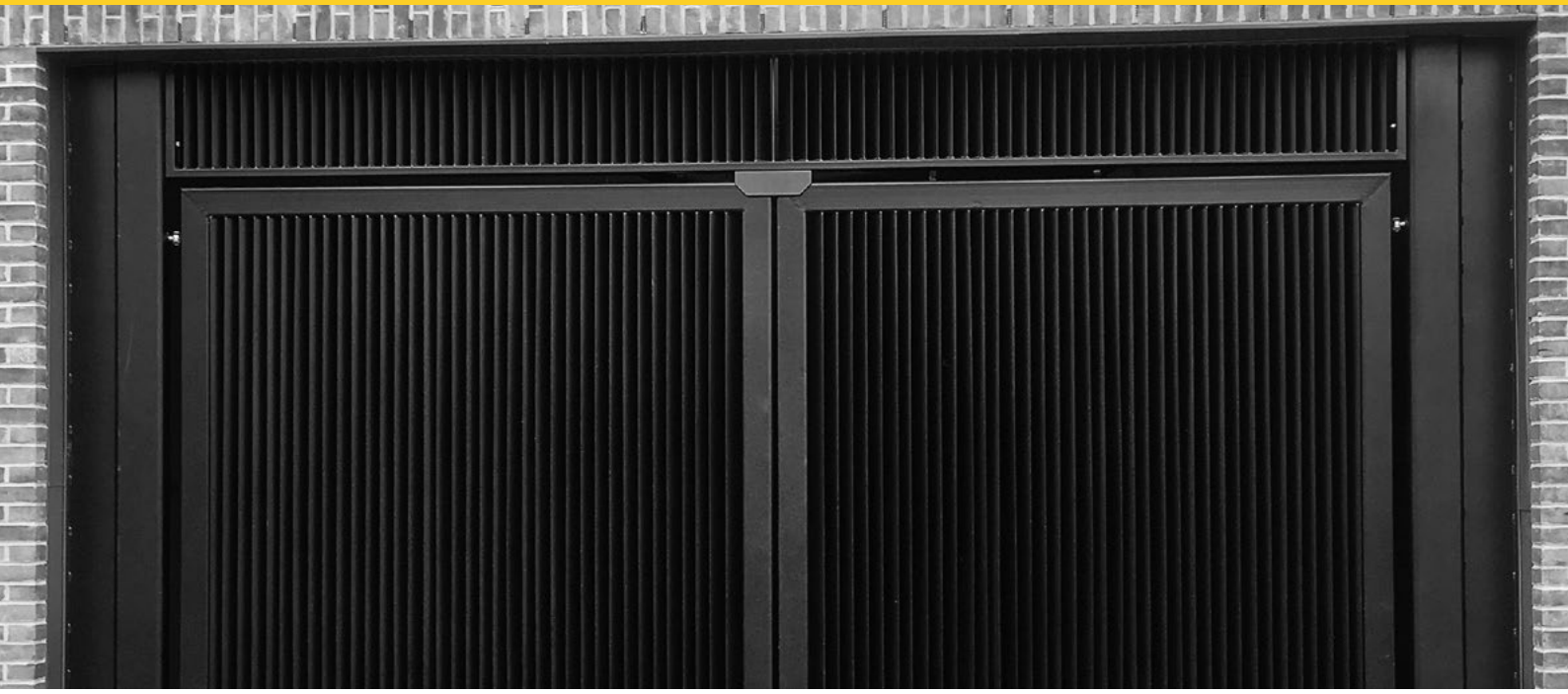
CASE STUDY

DOUBLE LEAF SWING GATES AT UNDERGROUND CAR PARK



Setting: Commercial. We were asked to survey and report findings following concerns raised by the managing agent. Although they had no training on the risks from automated gates, they had a feeling that the system was not as safe as it should be.

Type of Gate: Large double leaf swing gates of metal construction automated with 24-volt ram motors.

Site Details:

Multiple occupancy dwellings. Gates installed to secure an underground car park. Newly installed and only recently commissioned.

Rationale for gates: Primarily for security reasons, but as a new and high-end site, aesthetics also played a part in the decision to install automated gates.

Case Study: Double leaf swing gates at underground car park

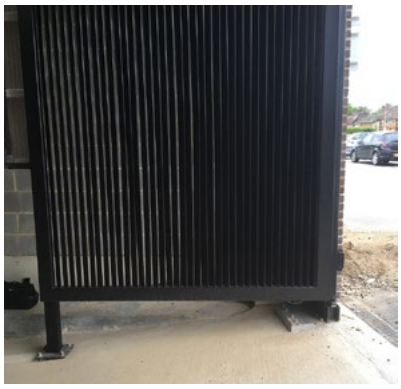
Safety issues identified:

1. Risk of impact and crushing. No safety edges fitted to the gate system. The leaves opened up towards walls on either side and had reducing gaps between the leaves as they close and a further reducing gap due to sloping ground under the leaves as they close. (The motors were also set up with a very large amount of force and could not be easily stopped by hand)

2. Risk of trapping and crushing. Reducing gap at the hinge positions as the gates opened and closed. This was unprotected and had the maximum amount of force at these points.

3. Risk of impact and crushing. Photocells fitted were positioned too far from the moving gate leaves and did not communicate with the system when activated.

4. Risk of crushing. Only two hinges were fitted to these large and heavy gates. If a hinge were to fail, the gates could easily fall, potentially causing serious injury.



no safety edges fitted to prevent crushing

no hinge protection or safety edge where the force is greater nearest the hinge

reducing gap and hinge with very high force

Action taken: Gate Safe's report was sent to the managing agents along with descriptive photos to illustrate the points raised. These were then forwarded to the installation company to review.

Initially, the installation company could not see any problems with the system. This demonstrates the importance of knowledge and specialist training to ensure the safety of an automated gate system. However, after a few phone conversations the installation company began to appreciate the risks associated with the installation and agreed to undertake the necessary remedial works.