

Grilles covering sump drains in swimming pools

Health and safety legislation places a duty on pool operators to protect those using their pools. This includes the risk of entrapment, which may lead to drowning. Therefore, pool operators need to take all reasonably practicable steps to remove any entrapment hazards.

Current industry guidance recommends that grilles should not have holes or gaps wider than 8mm in size.

*However, where a risk assessment shows that with gaps of 8mm there is still a **significant** risk of drowning due to entrapment, then pool operators need to take steps to ensure health and safety.*

Where total exclusion of fingers and toes of children and adults is necessary, this can be achieved by reducing the grille holes and gaps further so that the openings do not exceed 4mm in size. Reduced grille openings may also be necessary in splash pools where toddlers are present.

If smaller grille sizes are adopted, two other things will change; the water velocity into the sump; and the amount of water being passed to the treatment plant. Therefore, the decision to change grille sizes needs to be taken after full consideration of the effects on water circulation and treatment, the position of the outlet sump and the age of the users.

In pools which only have one sump outlet, there may be a real risk of a swimmer being able to cover the outlet with part of their body and being held by the suction effect of the pump. In this case, pool operators should make suitable modifications to their swimming pools.

A number of alternative improvements are possible such as:

- the installation of a second outlet sump located at a sufficient distance away that a lone swimmer cannot cover both outlets;
- provision of a pressure operated interlock switch on the pump which will isolate the pump if a significant change in suction pressure is detected; or
- provision of a second outlet line from a spillway or drain, which is permanently open to the suction line.

In all pools, grille covers should be securely fixed across the sump outlet.