

## Site Specification

Before a pool is installed, the site must be approved. This specification covers:

1. Site (space, access, surface and subsurface and slope).
2. Electrical supply.
3. Water supply.
4. Drainage

We inspect and survey sites where practical. If we can't do so, the school must provide photographs and survey results of the proposed site (see paragraph 4a below).

For queries or additional information, please contact one of:

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### 1) Space and access

- a) The pool setup requires a space of about 16m x 11m (see attached diagram). It is also useful to have a working area of at least 8m x 8m on the side of the marquee opposite to the trailer, to fabricate the marquee trusses.
- b) There must be unobstructed access to the site for the trailer, which is 2.4m wide.

### 2) Surface

Pools can be installed on asphalt or concrete surfaces.

- a) With asphalt, 16mm diameter spikes are driven to secure the marquee base plates. When the pool is dismantled and the spikes removed, the holes can be filled with cold mix. With concrete, it is important to know the quality and approximate thickness.
  - i) With good quality concrete at least 50mm thick, removable bolts are used.
  - ii) Old, thin concrete is treated the same as asphalt and spikes driven. The holes can be filled with dricon.

### 3) Sub-surface

The below ground characteristics must be checked, from both site plans and a visual inspection.

A pool must not be installed on filled ground where there is any risk of uneven settlement due to the weight of the pool (this could result in the pool liner splitting, support frames distorting or at worst the pool collapsing). Installation must also not be over any shallow drains, underground pipes, electrical cables or retention tanks which would be damaged by pegs, or worse, cause injury.

If installed on grass, the site should be well drained to minimise mud.

### 4) Slope

The site must be reasonably level and the pool positioned to minimise the slope, particularly along the axis of the long side. While the natural inclination is to position the pool symmetrically on a site, angling it sometimes significantly reduces the slope.

For the skimmers to work, the maximum allowable vertical difference is 2cm on the long (9.5m) side and 10cm on the short (5.2m) side (see survey points on the diagram below).

- a) The site must be surveyed to determine the vertical differences over the area that the pool will occupy. Trying to estimate the slope by eye or by using a spirit level is dangerous. If possible, we will survey the proposed site using a laser device.

If this is not possible, the school must arrange to survey the proposed site, with measurements at 2m intervals around the perimeter of a rectangle 10m long by 6m wide (see the attached diagram). With the right equipment, which all surveyors and many builders and earthmoving firms have, it only takes about 20 minutes to survey a site. The survey results must be sent to us with the photographs of the site. We may resurvey the site before confirming the installation.

- b) The trailer must be parked on the low side (down slope) of the pool.

### 5) Electrical supply

The electrical supply must be checked by an electrician, and if necessary, upgraded, as experience shows that some schools have inadequate or non-compliant electrical supplies. Requirements are:

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- a) 32 amp single phase 3 pin weatherproof outlet (such as a PDL 56CV332), fitted with a residual current device (to comply with clause 98(3)(b) of the Electricity Regulations 1997). Such an outlet may have been installed already for the mobile dental clinic, but should still be checked.
- b) The circuit supplying the outlet must also have a minimum capacity of 32 amps and preferably 40 amps. We have seen several instances where a 32 amp outlet has been installed, but on a circuit with lower capacity and as a result the pool heat pump trips the breaker.
- c) If a new circuit is being installed, then we strongly recommend installation for 3-phase wiring to the power outlet, terminated in both single and 3 phase sockets (PDL 56CV332 and PDL56SO532). The Residual Current Device (RCD) mentioned in (a) would need to be 3-phase.
- d) The electrical supply to the school can handle the additional load from the pool:
  - i) The load from the pool combined with others such as heaters, mustn't exceed the capacity of the supply to the school. If it does, then the pole fuse outside the school may trip.
  - ii) The transformer serving the school and other properties in the area can handle the additional load.
- e) The horizontal distance from the electrical board on the trailer to the power socket should be no more than 25m. The electrical cable is suspended from a wire strung between the top of a pole on the trailer and an eyebolt installed on the building above the power socket. The cable is 30m long but some vertical rise and fall must be allowed for.
- f) If the cable is strung over a driveway that trucks use, then an intermediate pole may be needed to increase the elevation of the cable and the horizontal distance should be no more than 22 metres.

Under clause 98(5) of the Electricity Regulations 1997, before supplying electricity the school must verify that the equipment on the trailer has either a warrant of electrical fitness or a certificate of compliance that is no more than 4 years old. PoolsiNSchoolZ trailers have a certificate of Compliance.

### 6) Water supply

The pool requires about 50,000 litres, including purging the water supply (if high pressure) and backwashing the filter once the pool has been filled. An adequate water supply usually isn't a problem in urban areas, but may be for rural schools.

Ideally the pool should be within 50 metres of a high pressure water source such as a fire hydrant, allowing the pool to be filled in less than an hour. If the water is badly discoloured, the flow rate should be decreased to reduce the amount of sediment being discharged.

If a high pressure supply isn't available, a water supply plan needs to be devised, which is both cost effective (note that the school pays for water) and practical in terms of the pool installation.

- a) Supply and cost. If the school has a bore and/or water tanks then it may be possible to fill from these, even if only partially. However, the school won't want to drain its water tanks, particularly going into summer. The alternative of trucking in water is expensive, even if the local water authority provides the water free at a truck filling station.

It may be possible to take water from several sources, say some from a local bore, some from on-site tanks, and the balance trucked in.

- b) Installation. Filling the pool from a low pressure source such as a garden hose can take up to 3 days, which means that an installer will need to return to check that the connections are watertight and that the filtration and heat pump systems are working properly.

A garden hose can be used to top up the pool, but it should have a backflow preventer and the water should cascade into the pool rather than the end of the hose being in the pool.

### 7) Drainage

For backwashing the filters and emptying the pool, the backwash outlet on the trailer (see attached diagram) should be within about 10 metres of a waste water drain trap (not a storm water drain) or a permeable surface such as grass that the water can be discharged onto or flow to.

# Pools in SchoolZ

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