

# Space net playground equipment

## ***Purchase, installation and ongoing maintenance of space net playground equipment in schools***

Space nets are play structures created from a web of ropes. They encourage children to negotiate their way through the ropes or climb up to the highest point. Most space nets range from 5–9 metres in height.

Space nets are attractive pieces of playground equipment and may be used for supervised and unsupervised play, and by unauthorised users on school grounds. Schools need to recognise that users of space nets will include: students, maintenance staff and unauthorised users after hours, on weekends and during holidays.



Although there have been few reported injuries associated with the use of space nets the following are the identified risks and issues that schools should be mindful of prior to purchase and after installation:

- falls
- entrapment
- robe burns
- entanglement
- multiple users
- staff conducting maintenance
- soft fall and drop zones
- vandalism
- ongoing maintenance
- impact between multiple users
- after hours usage
- foreseen misuse.

If you are thinking about purchasing a space net the risks and ongoing maintenance requirements and costs should be carefully considered.

## Assessing the risks

Undertaking a risk management process will assist you to make decisions about the purchase, installation, use and maintenance of a space net. Ensure the supplier or installer of the space net is able to provide your school with information to inform your assessments e.g. maintenance regimes.

Consider the following scenarios in your process:

- Students using equipment during school hours; e.g.
  - recommended number of users and subsequent supervision requirements
  - suitability of the equipment for the intended age groups – consider thickness of rope and grasp of students.
- Maintaining the equipment; e.g.
  - what maintenance is required and budget allocation
  - who is to perform maintenance and what training is required.

- Unauthorised users; e.g.
  - trespassers after hours.
- Impact on other school facilities due to unauthorised usage; e.g.
  - security at the school and potential vandalism to the space net or adjacent facilities.

Review your assessments annually or when circumstances change. Keep a copy of your documentation.

*If you purchase a space net ensure that the company has provided all the requested information on installation, maintenance and training prior to final payment for the product.*

## Fall zones and soft fall

Two factors need to be considered:

- the area (or fall zone) that a person is likely to fall into when falling from the equipment; and
- the impact absorbing potential of the surface that is fallen upon.

### Fall zones

The manufacturer's instructions should provide advice on the required fall zone. This will be approximately 1.5–2.5 m measured from the perimeter of the equipment. (AS/NZS 4685.1-2004 - page 24) The fall zone needs to be a clear space, free of obstructions around the space net.

The fall zone should also be clear of other playground equipment or structures e.g. shade sail tie downs. Adequate space between the space net and the other play equipment must be allowed to ensure students do not collide when exiting or falling from either piece of equipment. Supervision of students will also be a factor e.g. minimising students jumping or be pushed from the equipment

### Soft fall

Although initially a space net may look as if users could fall from significant heights, the structure is designed to prevent falls through the net as the next layer 'catches' the person.

As a requirement of installation, and so the structure complies with AS/NZS 4422 and AS/NZS 4685-2004, impact absorbing material such as unitary or loose fill (soft fall) is to be installed under the structure. It is important that soft fall is maintained and checked on a regular basis. Most space nets have unitary fill however if soft fall is used it must be maintained appropriately;

- sand or loose fill must be checked to ensure the appropriate depth of fill is maintained – minimum of 300-400mm – more if advised by the supplier
- regular raking (possibly daily) of sand or soft fill to ensure it is not compacted and maintains its impact absorbing properties
- daily raking will also help to locate foreign objects such as branches, rocks, toys, glass bottles and syringes so they can be promptly removed
- ensure there is adequate soft fall under entry and exit points – high traffic areas such as these require 20% more depth of loose fill to account for this movement and dispersal.

## Maintenance of the space net construction

The information and maintenance requirements provided by the manufacturer must be followed. From this information your school should develop a comprehensive maintenance program including assigning staff and time to maintenance tasks. Ask the company installing the space net to provide training or recommend companies that can provide the training.



It is likely that an external trained person may be needed to do some of the more complex maintenance checks. A risk management process should be completed that considers how maintenance is to be completed including:

- who, how and when maintenance will be conducted e.g. you may identify that a worker does not feel safe or cannot work at height even though the risk of a fall may be low
- training, equipment, time requirements of maintenance
- ongoing costs of equipment, training, time etc.

It is recommended that schools employ the use of an external trained contractor (this can be recommended by the installer) to conduct the physical checks of the space net that requires work off the ground.

Each space net will have specific maintenance regimes, the following is a list of the common elements:

- Daily visual inspection – tension, damage or any other obvious issues including raking soft fall sand (trained worker). This check to be completed at the start of the day before anyone uses the space net. Damage may have occurred after hours.
- Monthly comprehensive check – closed off/barricade (trained workers).
- Three monthly tension check – closed off/barricade (by the installers of the equipment).
- Other checks and maintenance as required.
- A sign-off or record that checks have been completed.

## Unauthorised usage

Space nets are a draw card for other people to use the equipment after hours and this may result in damage to the space net from:

- vandalism; e.g. cutting, burning or tying rubbish or bottles to the ropes. Lighters and knives have been used in attempts to damage the ropes on space net structures however the steel wire that runs through the core of the rope has, to date, prevented ropes being cut or burnt through; or
- heavy users climbing on the structure.

This may result in:

- Constantly having to re-tension the equipment because of multiple 'heavy' users on the space net;
- General vandalising of other areas that surround the space net.

## What should schools do?

- Seek advice from the designers or installers for the safe use and maintenance of the space net.
- Ensure that a risk management process has been conducted and documented.
- Develop a maintenance program for the equipment and the soft fall.
- Ensure workers that maintain the space net are fully trained.
- Monitor the maintenance program to ensure that it is effective and being followed.
- Consider the draw card aspect of the equipment – after hours usage and the impact that these unauthorised users may have on not only the space net, but other areas of the school that these after hours users have access to.
- Allow enough time for the workers to maintain the space net.
- Include maintenance in the financial budget.

**REMEMBER:** If properly installed, a space net is considered safe and compliant with legislative and Australian Standards on the day it is installed. It is up to the school to ensure that it remains safe from the day of installation. The advice of the manufacturer must be followed in terms of installation, use and maintenance.