Playing Safe:
Guidelines for the installation and maintenance of playground equipment in NSW government schools
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Asset Management Directorate

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Preamble

This Government is committed to the physical wellbeing of all students while using playground equipment in NSW schools. These guidelines are designed to ensure the provision of a safe environment for the physical development and recreation of students and community members.

The importance of play in the development of students and young people has been well documented over the years. As well, research shows that for some young people schools are the only place where they can participate in physical activity. More recently, attention has been focussed on childhood obesity within the school-age population in Australia.

With the release of the new Australian Standards for Playgrounds, it has become necessary to issue updated guidelines for the installation and maintenance of playground equipment in NSW government schools. This document replaces Safety guidelines for the installation and maintenance of fixed playground equipment in schools (1999).

As the Department does not supply playground equipment to schools, these guidelines are designed to assist schools to ensure that a safe environment is provided for the physical development and recreation of students.
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Playing Safe: Guidelines for the installation and maintenance of playground equipment in NSW government schools
1.1. The safe playground

A safe playground is an essential element of a safe school. Most students will use the playground at some time during the day and it is essential that all risks are identified and addressed.

The Department of Education and Training’s Occupational Health and Safety Policy outlines the responsibilities of managers, supervisors and employees to provide for all staff, students and visitors a healthy, safe and orderly environment in which to work and learn.

As part of its risk management strategy, the Department has developed this document in order to provide schools with guidance in relation to the installation of fixed playground equipment. This document is a revision of Safety guidelines for the installation and maintenance of fixed playground equipment in schools (1999).

The supervisors and users of the playground will develop best practices and controls. Schools will develop policies and guidelines in consultation with staff, students and parents.

Fixed playground equipment is only one component of a school playground. School communities should gather information and seek advice on playground design before proceeding with the purchase of expensive fixed equipment. If equipment is to be purchased, it should be part of the overall playground plan and suitably located. It will then become an integral part of the play experience.

The checklist that appears in this document will assist schools to identify risks within playgrounds. The items on the list are not exhaustive and the assessment of risks should take into account the strategies that appear in Risk management awareness training for principals and Asset protection training program.

If you have any enquiries regarding the Department’s policy on playgrounds or playground equipment, please contact the Asset Management Unit in your region.
1.2 New standards for playground equipment

All new playground equipment must comply with the current Australian and New Zealand standards. The new playground standards are AS 4685 Parts 1-6, 2004, which should be read in conjunction with the current product and risk management standards, AS/NZS 4486 and AS/NZS 4422.

1.3 Differences between the old and new standards

The key changes are as follows:

- For the new standard in six parts AS4685 – General, Swings (banned), Slides, Runways, Carousels (banned), and Rocking Equipment – there is no maximum equipment height (previously 6.0 metres).
- Protection against falling:
  - Maximum free height of fall is limited to 2.5 metres.
– Maximum height of upper body/overhead equipment is limited to 2.2 metres.
– New terminology has been adopted for the ‘height of fall’ definition, which is termed free height of fall. The initial wording, ‘reasonably foreseeable access’ has been removed.

• ‘Forced movement’ principle:
  – Impact of the ‘forced movement’ principle and its fall zones. Impact attenuation is required for surfaces on lower decks (where deck-to-deck height exceeds 1.0 metre). ‘Forced movement’ is defined as ‘the displacement of a user that is forced, restricted or limited by the construction of the playground equipment’.

• Static equipment zones:
  – Reduced zone dimensions apply where equipment has free heights of fall less than 2.5 metres. This includes slides, tracks, track rides and spring rockers.

• Protection against entrapment:
  – Clearly defined entrapment conditions, tests and dimensions for finger, foot, torso, head, neck, and toggle.

• Design considerations:
  – Minor structural design changes.

• Guardrails and handrails:
  – Minor changes in the provision of guardrails on equipment platforms.
  – Requirement for a safety rail across all access points for slides higher than one metre to prevent accidental falls.
2 Planning your school’s playground equipment

2.1. Setting the context

Choosing playground equipment

It is important to explore the needs of the school and its community before a decision is made to acquire equipment.

The choice of equipment and the design of its layout are determined by a school’s environment. Needs differ between schools and therefore equipment selection and layout will vary between schools.

The choice of equipment should involve consultation with the whole school community, especially if there are programs that include community use of the school’s facilities.

Age group

The age group of the students for whom the equipment is to be provided will determine many features of the design.

Where possible, the playground equipment should be designed specifically for particular ages or groups. Consideration should be given to the limitations of younger students (e.g. platform heights) and the need for greater challenge for older students.

Physical development and recreation

The type of development to be achieved should be clearly defined to establish the type of equipment required. It should be decided whether gross-motor skills, co-ordination and balance and/or therapy requirements, in the case of a special school, are to be achieved.

The proportion of use for physical development compared to recreational use is an important consideration.

After hours

It is important, when considering the design of equipment, to recognise that the equipment may be used by students of all ages and stages of physical development and condition, with or without supervision, during hours when the school is unoccupied.

2.2. Identifying the location

Consider and eliminate locations where potential intrusions into the safety zones of equipment areas occur, such as shade structure posts, fencing, gates and trees, landscaping, taps and other services. These items also include the soft-fall edging itself. It is important to measure the site twice to ensure that the space provided for the equipment is actually available and that the site topography can safely accommodate the equipment.

The site for the fixed equipment should allow a 2.5 metre clearance from the perimeter of equipment in school playgrounds or a 1.9 metre clearance for supervised early childhood settings (see 4.1. Installation).
When determining locations, consideration should be given to possible future extensions of the equipment and/or nearby buildings to ensure sufficient area is available. The site should preferably be shaded (see Sun safe policy).

Consideration for, and consultation with, adjoining neighbours should occur if the playground equipment is to be installed where neighbours could be affected (e.g. visual or noise impact).

**Site requirements**

Care should be taken to ensure that the site chosen is free of easements, power lines, water, gas, drainage or other services and is not intended for future permanent buildings or demountables.

**Topography**

The site should be reasonably level, with only a gentle slope at most.

**Vegetation and ground cover**

Growth around the site selected for the equipment should not be such that extensive removal of trees and shrubs is necessary to obtain the required 2.5 metre clearance. Where trees must be removed, appropriate council permits should be obtained beforehand. It is very important that the area be free from rocks, stones, pipes, other rubble and tree stumps.

**Drainage**

Where possible, the area selected should be self-draining to avoid the need to restrict use for extended periods of time following wet weather. Adequate provision should be made for drainage.

**Supervision and security**

The site should be easily supervised and should provide adequate open views from occupied areas of the school and, if possible, from adjoining properties.

**Traffic flow**

The site should not interrupt normal lines of movement within the school grounds or inhibit other play areas.

2.3. Equipment selection

The first step in equipment selection is to decide whether or not fixed playground equipment is needed at the school. This involves consideration of the purpose for which the equipment will be used.

Once it has been decided whether the equipment required is adventure playground, gross-motor track, gymnastic or a combination of the above, the individual items may be selected.

**Commercial equipment**

Commercially produced playground equipment is available on government contract. Items approved for schools have been through a formal evaluation process to assess their suitability. *(Contract 305 – Outdoor and recreational furniture)*
Funding
The source of funding must be clearly identified before inviting suppliers to quote.

Material
The type of equipment selected will influence the material used for construction and maintenance of the equipment.

To reduce the risk of vandalism, consideration should be given to the type of materials chosen, e.g. vandals could slash rope-scrambling nets. Exposure of certain materials to the elements is another factor to be considered.
3.1. Equipment

Specifications

Existing equipment: All existing equipment must comply with AS 1924-1981. However, when modification occurs to existing equipment then such equipment must be brought into full compliance with AS 4685. All equipment and impact-absorbing materials should conform to the current Australian standards for playground equipment. The Department considers Australian standards to be a minimum requirement.

The following specifications should be met when designing, selecting and installing equipment on Departmental premises.

AS/NZS 4486. 1:1997
Playground and playground equipment
Part 1: Development, installation, inspection, maintenance and operation

AS/NZS 4422: 1996
Playground surfacing
Specifications, requirements and test methods

Note: It is usually not necessary to purchase these documents. Ask the supplier if the equipment or impact-absorbing material being considered complies with these standards, and to provide a written statement to that effect. If a school community group decides to install equipment rather than purchase it from a manufacturer or supplier, it must ensure that the equipment and its installation meet these standards, and the design should be verified by an engineer.

Use of CCA (Copper chromium arsenate ‘Treated Pine’) timber:

The installation of new equipment made from CCA timber is banned in NSW schools.

3.2. Banned equipment

Because of the potential risk of injury, the following items of equipment are banned from use in Departmental premises:

Swings: All types, including swinging ropes and tyres (some items for students with disabilities may be exempt in specific settings).

Seesaws
Roundabouts (carousels)
Maypoles
Flying foxes: except in the case of Field Study Centres or non-mainstream school locations given written approval by the relevant Asset Management Unit manager.
3.3. Approval process

There is a two-step approval process to be completed before equipment is purchased.

Step One
- The approval of a detailed plan by the principal is required prior to the installation of fixed playground equipment in school grounds.

The plan should include:
- position of equipment relative to buildings, drains, trees, fences, paths, gates, roads, walls, watercourses and other equipment;
- definitive measurements;
- the items of equipment to be installed;
- distances between items, clearance from containment borders and other objects, height of platforms and overall heights, materials used for construction and sizes of components;
- the type of impact-absorbing surface and border;
- safety issues;
- maintenance issues;
- source of funding, costs, payment schedule, installation time, supplier, who is to install and the projected completion date;
- proposed inspection and maintenance schedule;
- cleaning requirements;
- the purpose for which the equipment is intended, e.g. physical development and educational use;
- an outline of the policies and programs required to ensure the safe introduction and continued operation of the proposed equipment.

Step Two
- The siting of fixed playground equipment in school grounds is to be approved by the manager of your Asset Management Unit. This is also to confirm that the proposal to install fixed equipment does not affect future capital works projects, access for the provision or removal of demountables or any other property-related matters.

Before purchasing equipment or commencing installation, the principal must approve a detailed plan.

3.4. Responsibility of designers and manufacturers

Equipment designers have a responsibility under a general duty of care to ensure that the playground equipment satisfies all of the requirements of the playground standards. In the event of an injury, death or equipment failure they can be held liable for negligence. They are required to provide legible manufacturing details marked on all equipment, plus their ABN, equipment reference and year of manufacture.
Designers and manufacturers of equipment are also responsible for the provision of installation instructions to ensure that the completed installation, when undertaken in accordance with instructions, satisfies all the requirements of the standards, particularly with regard to structural integrity and entrapment potential.

3.5. Responsibility of installers

Playground installers have a responsibility to ensure that the installation is carried out strictly in accordance with the recommendations and instructions of the manufacturer. If injury, death or equipment failure occurs as a result of failure to install equipment in accordance with instructions, the installer will be considered negligent.

If a supplier installs equipment, final payment should not be made until the principal is satisfied that the equipment meets these guidelines. The principal should receive a letter from the supplier confirming that the equipment and/or impact-absorbing surface meet current Australian standards.
Safety considerations

All equipment installed on Departmental premises becomes Departmental property. The Department may be responsible for any injury or incident occurring from the use of this equipment by either authorised or unauthorised persons.

Any accidents or incidents involving playground equipment should be reported and investigated in accordance with Departmental instructions. Particular attention should be paid to any recurring types of accident or incident involving playground equipment.

A formal system of recording injuries will ensure that ‘black spots’ are identified and problems rectified. For a sample accident form see Appendix 7.5.

4.1. Installation

Schools need to seriously consider how the equipment will be installed. Whoever installs the equipment must be familiar with the requirements of the standards, especially entrapment and fall zone provisions.

<table>
<thead>
<tr>
<th>Installation option</th>
<th>Considerations/comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Supplier installed</td>
<td>• Supplier is familiar with requirements of the standards</td>
</tr>
<tr>
<td>• School installed/supplier supervised</td>
<td>• Some suppliers may insist that company representatives supervise the installation</td>
</tr>
<tr>
<td></td>
<td>• Some suppliers may insist that an inspection of the completed installation be undertaken prior to use</td>
</tr>
<tr>
<td>• School installed and supervised</td>
<td>• Ensure that the skills, labour and equipment are available to install the equipment to the Australian standards</td>
</tr>
<tr>
<td></td>
<td>• There is a risk that schools installing manufactured equipment may void warranties and consequently incur legal liabilities for the Department</td>
</tr>
</tbody>
</table>

Remember: The part of the school site where the installation or maintenance of the equipment is occurring becomes a workplace and therefore all occupational health and safety requirements apply.
Sloping ground

Often on site there may be an issue with the slope of the ground. If it is a large installation, the equipment effectively rises out of the ground as it is installed down the slope, and this may inadvertently increase free height of fall of the equipment.

Borders

A distinct border to indicate separation from the balance of the playground space should surround the area occupied by the fixed playground equipment. Borders may be a fence or a border of logs. It is important that the selected border does not become a trip hazard. The border may be above ground (at least one step high), or flush with the ground.

Clearances/Safe fall zone

A 2.5 metre clearance is required from the perimeter of the equipment to any paths, fences, trees, buildings, structures or other equipment. This 2.5 metre clearance must be covered by a certified (tested) impact-absorbing material to the required depth.
**Concrete footings**

Concrete footings should be at least 200mm below ground level. The impact-absorbing material is then an additional 300mm above ground level (for an organic material). Footings should have a minimum footing depth of 600mm and a minimum diameter three times the cross section area of the post.

![Concrete footing diagram]

**Nuts and bolts**

All nuts, bolts, washers, spikes and nail heads must be recessed flush with the surround surface.

**Barriers**

Barriers are provided on equipment to prevent users from falling off or through the structure. It is important that barriers be solid or have vertical bars. Barriers must not be able to be used as a climbing frame.

**Grab rails**

Grab rails must have a diameter between 16mm and 45mm.

**Rope scrambling nets**

Rope scrambling nets should be removable and placed in storage when not in use.

**Tube ends**

Tube and pipe ends must be fitted with a permanent cap or plug.
**Tyres**

The use of tyres as a playground feature is not recommended. Following are some of the risks associated with the use of recycled tyres:

- Worn steel-belted tyres can breakdown to expose sharp steel fibres.
- The shape of tyres makes them a potential harbour for vermin or spiders, and internal inspection is difficult.
- Tyres may also become significant litter traps.

**Head and body entrapment**

Areas of potential head or body entrapment should not exist in any place or at any height on equipment.

**NOTE:** Head entrapment is only measured from 600mm above ground.

Entrapment occurs when part of an accessible opening, either partially or completely enclosed, is too small to allow withdrawal of the head. Openings should be smaller than 89mm or larger than 230mm.

Finger entrapment occurs in pipes or tubes or holes between 8mm and 25mm. Chains must be short link type or have gaps less than 8.6mm. Any chain connector (such as ‘S’ hooks) must have gaps greater than 12mm or less than 8.6mm.

Clothing and toggle entrapment can occur when students are playing on equipment. All equipment must be free of areas or points where clothing/toggles can catch.

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*A number of deaths have been reported overseas when toggles in clothing have caught on equipment and the child has strangled.*
4.2. Impact-absorbing surfaces

Tested and certified impact-absorbing material is required under all equipment with an external free height of fall of 500mm or more. The material is required to cover a fall zone of 2.5 metres around the equipment (1.9 metres for supervised early childhood centres).

Impact-absorbing material is required under all equipment, but where it is less than 500mm above ground it does not have to be tested.

External free height of fall is the vertical distance between the underlying finished playground surface and any accessible surface within the equipment. This should not exceed 2.5m for primary schools and 1.5m for pre-schools.

Internal free height of fall is the vertical fall distance between two surfaces within a piece of equipment.

Examples showing internal and external ‘free height of fall’ (h).

The internal free height of fall should not exceed 500mm (or 300mm for pre-schools) without infill panels/barriers and guardrails on the higher surface or platform to prevent falls. If the vertical distance between two platforms is more than one metre, then tested impact-absorbing material must be applied to the lower platform.
The selection of material will depend on the individual site and its particular needs. All materials under equipment over 500mm high must conform to AS/NZS 4422:1996. Materials must have critical fall height test results, and loose materials should have a minimum initial depth of 300mm. This is the standard for heavy traffic areas and allows for some settling and compaction to 250mm (which is the minimum allowable depth). This depth, 250mm, must be maintained at all times.

Shredded pine bark, selected tree mulching and commercially prepared surfaces or products may be used as impact-absorbing material. Test results for the material should be obtained from the supplier. Obtain a letter from the manufacturer or supplier stating that the product conforms to AS/NZS 4422:1996.

Loose-laid impact-absorbing materials should be monitored and maintained regularly (e.g. weekly), for instance by raking and topping up to ensure compliance with specifications. Loose materials should be regularly checked for sharp objects.

A table detailing the properties of a number of impact-absorbing materials has been included at the end of the playground safety checklist.

### 4.3. Track rides

A track ride, if purchased, should be installed as the final activity on a circuit of equipment because of its potential to injure nearby users. It should preferably be a stand-alone structure.

**NOTE:** Entry points to track rides should have undersurfacing applied to them.

### 4.4. Existing equipment

It is the principal’s responsibility to ensure that existing equipment complies with these guidelines. If the equipment does not comply, steps should be taken to isolate the equipment from use, then to modify it so that it complies with AS 4685-2004, or to remove or replace the equipment.

Existing equipment should be assessed using the playground equipment safety checklists (see Appendix 7.1).

### 4.5. Introduction to new equipment

Schools must develop and regularly review policies and guidelines for the safe use of playground equipment. All staff who supervise the use of playground equipment should be familiar with the school’s policies and guidelines.

It is imperative that schools provide direct supervision by a teacher whenever fixed playground equipment is in use.

A program for the introduction of new play equipment must be developed and implemented. The program should ensure the following:

- All staff who will supervise the use of the equipment should be familiar with:
  - the physical and educational development for which the equipment is designed;
  - techniques required for use, e.g. hand grips;
  - ways of limiting risk factors such as correct footwear, age groups of students and the number of students using the play equipment at any one time;
  - the introduction program.
- All students who use the equipment should be familiar with:
  - the types of activities intended;
– techniques required for use, e.g. hand grips;
– any safety rules which apply to the equipment.

• During the early stages (about the first eight weeks) of introduction supervision should be provided to a greater degree than normal, being gradually reduced to an effective working level after eight weeks.

Pre-school children are active learners who develop skills through practising and extending their activities. Their play should be closely supervised at all times, and limitations are best brought to the attention of individual children as they play.

4.6. Use of equipment

Before students are allowed access to equipment on hot days, any exposed metal bars or surfaces, which could cause burns or blisters, should be checked. Immediate use following wet weather could cause slipping or loss of grip.

The number of students allowed on each piece of equipment should be strictly supervised to avoid overcrowding and accidents. A ‘waiting zone’ for follow-on users should be established at a safe distance from pieces of equipment. Young students are often unaware of the dangers of waiting near swinging feet or at the base of a slide.
School playground equipment and impact-absorbing material must be regularly inspected and maintained in a safe condition. Preferably inspections should be made daily before students use the equipment.

Equipment can have been designed, fabricated and installed perfectly but not maintained correctly and may eventually not comply. It is the school’s responsibility to ensure that equipment is maintained in accordance with the manufacturer’s instructions. Injury due to lack of maintenance is possible and must be avoided by ensuring that correct and on-going maintenance occurs.

 Manufacturers must supply a maintenance schedule, and advice should be sought from the supplier about the equipment’s maintenance schedule. The schedule should be adopted and a log kept. The school should organise regular inspections to ensure that all fittings remain tight. Written records of inspection should be kept.

Only genuine parts from the manufacturer should be used to replace worn parts on equipment. This is particularly so during the warranty period otherwise the equipment warranty will be voided. Loose impact-absorbing material should be monitored daily for even spread and depth and foreign matter. It should be maintained regularly, e.g. by raking and topping up to maintain a depth of 300mm. Loose materials should be regularly checked for hazards.

A sample on-going maintenance checklist is provided in Appendix 7.3.
Sources of information

**DET policies**
Reporting School Accidents (PD200200064)
http://www.det.nsw.edu.au/policies > Student Administration > General

Protection from the Sun: Guidelines to Assist in Implementing the Student Welfare Policy (PD200200055)
http://www.det.nsw.edu.au/policies > Student Services > Student Health

Occupational Health and Safety Policy
http://www.det.nsw.edu.au/policies > Staff > Occupational Health And Safety

**Kidsafe NSW Inc.:** Playground Advisory Unit
Ph: (02) 9845 0890

**Kidsafe publications**
“Plan it” Guidelines
Playground Safety Fact Files
Schools Information Kit
Playground Safety Information Kit
http://www.kidsafensw.org > Playground Safety > Available Publications

**Standards Australia**
http://www.saiglobal.com > Quick Search > type in the standard number

**AS 4685.1-2004 : Playground equipment – General safety requirements and test methods**

**AS 4685.3-2004 : Playground equipment – Particular safety requirements and test methods for slides**

**AS 4685.4-2004 : Playground equipment – Particular safety requirements and test methods for runways**

**AS 4685.6-2004 : Playground equipment – Particular safety requirements and test methods for rocking equipment**

**AS/NZS 4422:1996 : Playground surfacing – Specifications, requirements and test method**

**AS 4422-1996/Amendment 1-1999**

**WorkCover NSW**
http://www.workcover.nsw.gov.au > Industry > Education

**Department of Commerce**
Contract 305 – Outdoor and Recreational Furniture
### 7.1 PLANNING YOUR PLAYGROUND: CHECKLISTS

The following checklists have been designed for use by school communities in determining choice of playground equipment, managing installation and ensuring ongoing maintenance of equipment.

#### 1. Pre-purchase and/or at installation

<table>
<thead>
<tr>
<th>When choosing equipment consider:</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the maximum fall height under 2.5 metres for primary schools?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the fall height under 1.5 metres for pre-schools?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do handgrips accommodate the size of a child’s hand?</td>
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<td></td>
</tr>
<tr>
<td>Is the internal fall height less than 300mm for pre-schools?</td>
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<td></td>
</tr>
<tr>
<td>Are all infill panels solid or vertical bars?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do all elevated platforms over 500mm have vertical or solid barriers?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Are hand supports provided on all rungs, stairs, platforms and slides?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Are the edges of slides high enough to prevent a fall over the edge (50mm min.), or is the slide on an embankment?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Is there a runoff at the end of the slide?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Is the runoff parallel to the ground?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Is the equipment free of potential head and body entrapment?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Is the equipment free of potential crushing and wedging points?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the impact-absorbing material conform to AS/NZS 4422?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the manufacturer have public and product liability insurance?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there sufficient space for a 2.5m clear fall zone, with a border?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### When siting the equipment consider:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there adequate drainage (i.e. no standing water or washaways)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there sufficient shade?</td>
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<td></td>
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</tr>
<tr>
<td>Is there an adequate fence around the area? (Pre-school condition only)</td>
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<td></td>
</tr>
<tr>
<td>Is good visibility for supervision achieved?</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Is there access for children with disabilities?</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### When installing equipment consider:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the equipment sited so as not to interfere with the free play space and normal traversing patterns?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has allowance been made for at least 2.5m clearance around the equipment?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are all concrete footings covered by earth to a depth of at least 200mm?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the border free from sharp edges and trip hazards?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are all slides facing south or southeast?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the sandpit separate from the other play areas?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the sandpit have an appropriate cover?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is loose impact-absorbing material suitable and of appropriate depth (at least 300mm)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the impact-absorbing material spread evenly under the equipment?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the impact-absorbing material been checked for protrusions and sharp objects?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is synthetic material (if used) properly secured to the ground?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the sealed playing area in good condition?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the fixed seating in good condition?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. At installation and on an ongoing basis

<table>
<thead>
<tr>
<th>Ensure that:</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>All staff are aware of playground and play equipment rules.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All staff are aware of the school’s accident and first aid procedures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All accidents are reported and recorded in the proper manner.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All accidents are investigated.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is a written record of inspections and maintenance checks.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is a supervision program for playground equipment.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 7.2. PLAYGROUND SAFETY AUDIT

<table>
<thead>
<tr>
<th>AREA CHECKPOINTS</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Comments/Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Free fall zone</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is the area free from obvious drainage problems?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is the area free from any tripping hazards?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are all borders secured?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is the undersurfacing adequate for fall height of the equipment?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is the fall zone free of rocks, stones, glass other sharp objects?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Equipment: general</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is all equipment fixed unless it is designed to be portable?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is all equipment complete, with no missing parts?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are timber components free from excessive warping or splintering?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is all steel used for construction stainless or coated (e.g. galvanised, zinc coated, powdered or painted)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are all ends of the tubular steel sections capped?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are all components free from distortion (e.g. not bent, vandalised or out of level)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is the protective paint (timber and steel) or coating (metal) in good condition?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Is equipment free from excessive rust, or evidence of broken members or cracked welds?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are the plastic or fibreglass components free of cracks, damage or wear that would affect the durability and safe use?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are concrete elements stable?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are all footings covered so that they do not protrude above ground?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are all fixed structures (including the footings) stable and not deflected by the loading or movement of the user?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are guardrails and handrails secure?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3. Equipment: fixings

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Comments/action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Are all joints fastened properly (all main load-bearing joints bolted)?
- Are all accessible bolt heads and nuts recessed, rounded or covered with protective caps and galvanised, coated or made from stainless steel?
- Are all small components, including fasteners, present?
- Is all steel chain and its connectors galvanised or made of corrosion-resistant metal?
- Are shackles, bearings and wire ropes operating smoothly and are they lubricated if necessary?
- Are rope nets sound, including attachment and anchor points?

### 4. Sandpits

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Comments/action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Are sandpits free from unwelcome debris? (e.g. syringes, glass, animal droppings and spiders/insects)
- Does the sandpit need to be replenished to maintain the required depth of sand? (The sand level should not drop more than 100mm below top edge of edging)
- Has the sandpit been watered and cleaned with salt solution?
- Are the sandpit edging/surrounds intact and free from cracking or damage that may become a trip hazard and cause injury?
- Are the sandpit edging/surrounds free from any build-up of sand? (The sandpit should be swept regularly)
- Is the cover of the sandpit intact and not torn or damaged?
- Does the cover adequately cover the sandpit area?
- Can the cover be appropriately secured?
7.3. ON GOING MAINTENANCE CHECKLIST

The following checklist may provide a useful proforma for personnel responsible for maintenance checks.

MAINTENANCE CHECKLIST

<table>
<thead>
<tr>
<th>School:</th>
<th>Prepared by:</th>
<th>Date:</th>
</tr>
</thead>
</table>

### General:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Items</th>
<th>(Insert names of equipment to be checked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the area around the equipment cleaned regularly?</td>
<td></td>
<td>e.g. monkey bars</td>
</tr>
<tr>
<td>Is the equipment free of cracking or splintering?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the free-play area tidy and well maintained?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the sandpit cleaned before use?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Daily (may be assessed by teacher on duty):

<table>
<thead>
<tr>
<th>Issue</th>
<th>Items</th>
<th>(Insert names of equipment to be checked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the impact-absorbing surface spread evenly under the equipment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the impact-absorbing material of the required depth?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the impact-absorbing surface material been checked for sharp objects or foreign matter?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the border free from sharp edges and trip hazards?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Problems to look for regularly (e.g. weekly):

<table>
<thead>
<tr>
<th>Issue</th>
<th>Items</th>
<th>(Insert names of equipment to be checked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinch points</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unplugged holes in wood/pipes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broken welds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open hooks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broken anchor bolts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broken guardrails/handrails</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharp edges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loose or missing nuts, bolts or nails/barriers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharp points/protrusions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worn chains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worn pinions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warped/split/splintered wood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worn bearings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposed footings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Also check:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Items</th>
<th>(Insert names of equipment to be checked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All moving parts for smooth movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ropes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timber for insect infestations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Static equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal frames</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linking items</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Maintenance needed for: ____________________________

Repaired by: ____________________________ Date: __________________

Checked by: ____________________________ Date: __________________
## 7.4. IMPACT-ABSORBING MATERIALS

<table>
<thead>
<tr>
<th>Impact-absorbing material</th>
<th>Recommended depth</th>
<th>General comments</th>
</tr>
</thead>
</table>
| Shredded pine bark or wood chip mulch | 250mm–300mm (Should have critical fall height test results) | **Advantages:** Cheap, spreads easily.  
**Disadvantages:** Breaks down easily; Needs to be refilled regularly to required depth or raked; Could harbour spiders etc. |
| Wood peelings | 250mm–300mm (Should have critical fall height test results) | **Advantages:** Durable, moderately priced.  
**Disadvantages:** Splintery and breaks down quickly; Needs to be refilled regularly to required depth or raked; Could harbour spiders etc. |
| Grass *(Note: Suitable only for equipment up to 500mm high)* | Should have critical fall height test results | **Advantages:** Requires no special preparation if ground is suitable.  
**Disadvantages:** Should be well watered; Requires intensive maintenance; Drainage can be difficult; Can conceal uneven surface.  
**N.B. SUITABLE ONLY UNDER LOW OR PORTABLE EQUIPMENT (i.e. equipment less than 500mm high)** |
| Rubber tiles or pavers | Must have adequate safe fall test results on material. Tile depth depends on test results and the height of the equipment. | **Advantages:** Durable, low maintenance.  
**Disadvantages:** Can be expensive; Can be hot in summer. |
| Foam rubber and synthetic grass | Must have adequate safe fall test results on material. Depth depends on test results and the height of the equipment. | **Advantages:** Durable; Low maintenance; Easy visual checks.  
**Disadvantages:** UV-sensitive; Expensive. |
| Washed river sand *(Note: Not generally recommended, but must be at least non-compacting sand)* | 300mm. Should be non-compacting and have critical fall height test results, preferably on site. | **Advantages:** Cheap.  
**Disadvantages:** Test results vary; May create play conflicts; Dry sand can cause injury in windy weather (e.g. to eyes). |
### 7.5. SAMPLE REPORT FORM: ACCIDENT TO SCHOOL STUDENT

(refer to: Reporting School Accidents Policy 2002, located on the DET website)

<table>
<thead>
<tr>
<th>Name of school</th>
<th>School Education Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### PERSONAL DETAILS OF STUDENT

<table>
<thead>
<tr>
<th>Full name</th>
<th>Age</th>
<th>Date of birth</th>
<th>Name(s) of parent(s)/carer(s)</th>
<th>Address</th>
<th>Postcode</th>
<th>Contact telephone number/s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### ACCIDENT DETAILS

<table>
<thead>
<tr>
<th>Date of injury</th>
<th>Day of week</th>
<th>Time (am/pm)</th>
<th>Location of accident</th>
<th>Describe the injuries sustained by the student</th>
<th>State exactly what happened</th>
<th>Was medical attention given</th>
<th>Name of doctor/hospital</th>
<th>On whose authority: teacher's/parent's?</th>
<th>Subsequent treatment of student (if known)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of person completing this report</th>
<th>Serial number (if appropriate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### CERTIFICATION

- Parent(s)/carer(s) of injured student have been notified if practicable
- The student has been kept under observation for a reasonable period
- Medical attention has been obtained

<table>
<thead>
<tr>
<th>Name (in print)</th>
<th>Signed</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Principal/Delegate