

# School Playground Development Guidance



City of Edinburgh Council  
Communities and Families  
School Estate Planning Team

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# Playground Development Process Key Points

Change Requirement Identified		
1	Expression of Interest	<ul style="list-style-type: none"> <li>• Plan for Change</li> <li>• Funding sources identified</li> <li>• Project Costs considered</li> <li>• EN1176 Compliance</li> </ul>
Approval Gateway		
2	Commissioning and Procurement	<ul style="list-style-type: none"> <li>• Commissioned by SEPT on behalf of project</li> <li>• Transfer funds from 3<sup>rd</sup> Parties to School</li> </ul>
3	Design	<ul style="list-style-type: none"> <li>• Council approved designers</li> <li>• EN1176 Compliance</li> <li>• Vision for School Grounds</li> <li>• Consultation</li> </ul>
Approval Gateway		
4	Build/Install	<ul style="list-style-type: none"> <li>• Council approved Project Manager appointed</li> <li>• Risk assess build/install process</li> </ul>
5	Post Installation Inspection and Risk Assessment	<ul style="list-style-type: none"> <li>• Post installation inspection and remedial works completed</li> </ul>
6	Introducing the Completed Installation	<ul style="list-style-type: none"> <li>• Plan for opening</li> </ul>
7	Ongoing Inspection and Maintenance	<ul style="list-style-type: none"> <li>• Quarterly inspections</li> <li>• Action plan for remedial works</li> </ul>

# Introduction

**The City of Edinburgh Council welcomes the efforts of staff and parents to provide safe, challenging, and appropriate activities and facilities in school playgrounds to support play and learning and improve the health and wellbeing of our children. These guidelines establish a clear process to help head teachers, parent councils, community groups and Council departments to work together to improve and manage school grounds.**

For children play is one of the most important aspects of their lives and children need, and are entitled to, quality play experiences as part of their everyday experience. The benefits of play for child development are well known and evidenced, including improving physical activity and dexterity, developing social skills, stimulating creativity and imagination, supporting intellectual curiosity and self-led learning, self-risk assessment and helping to foster a love for the outdoors. Schools that develop their outdoor play provision commonly report: improvements in behaviour; classes that settle more quickly after break time; children who are happier and more content in school; and Curriculum for Excellence experiences and outcomes that happen without direction from teachers.

## **Children's Rights**

The United Nations Convention on the Rights of the Child (UNCRC) sets out 54 articles that define how children and young people should be treated and the UK Government have signed up to the convention. There are three articles that are useful to consider when providing for children's play spaces:

### ***Article 31: The right to leisure, play and culture***

Children have the right to relax and play and to join in a wide range of cultural, artistic and other recreational activities.

### ***Article 12: Respect for the views of the child***

When adults are making decisions that affect children, children have the right to say what they think should happen and have their opinions taken into account.

### ***Article 15: Freedom of association***

Children have the right to meet.

## **Play Strategy for Scotland (2013)**

The Scottish Government's vision is for Scotland to be the best place in the world to grow up. The strategy states that: "Play encompasses children's behaviour which is freely chosen, personally directed and intrinsically motivated. It is performed for no external goal or reward, and is a fundamental and integral part of healthy development – not only for individual children, but also for the society in which they live."

## **Building Better Schools: Investing in Scotland's Future (2009)**

The Scottish Government and COSLA's joint school estate strategy sets out their shared vision for Scotland's schools: "...which are well designed, maintained, and managed and which encourage continuous engagement with learning; which are far

more than just 'educational establishments' whose quality of environment supports an accessible range of services and opportunities and which enrich the communities they serve and the lives of learners and families."

**City of Edinburgh Council's Vision for School Grounds (2018)**

The "Vision for School Grounds" document sets out the approach City of Edinburgh Council would like Heads of Establishments, parent and community bodies and design teams engaged in school grounds projects to take. It highlights the value of outdoor learning and emphasises that school grounds should be safe, inclusive and diverse spaces offering different behavioural settings for different types of learning and play opportunities. A core principle of the vision is that playgrounds and play areas should have educational value.

**Play in Partnership: a play strategy for the city of Edinburgh (2014)**

Edinburgh aims to be a play friendly city where all children and young people can enjoy their childhood. They will have access to play opportunities in a range of different settings which offer variety, adventure, and challenge. They will be able to play freely and safely and make choices about where, how, and when they play.

# Health and Safety and the Benefits of Play

**The design and installation of all new playground developments at City of Edinburgh Council schools should be compliant with EN 1176 standards. This does not mean that only industry standard equipment can be used in playground developments, but it does mean that the design and installation of natural features and their associated surfaces must be compliant with the standards of EN 1176 relating to protection against injury due to movement, falling, entrapment, protrusions, etc. (For further essential information on EN 1176 see Appendix 3)**

A key message from the Health & Safety Executive (HSE) is 'Play is great for children's well-being and development. When planning and providing play opportunities, the goal is not to eliminate risk, but to weigh up the risks and benefits. No child will learn about risk if they are wrapped in cotton wool'.

The HSE fully recognises that play brings the world to life for children. It provides for an exploration and understanding of their abilities; helps them to learn and develop; and exposes them to the realities of the world in which they will live, which is a world not free from risk but rather one where risk is ever present. The opportunity for play develops a child's risk awareness and prepares them for their future lives.

The HSE and the Play Safety Forum have produced a joint high-level statement that makes clear that:

- Play is important for children's well-being and development.
- When planning and providing play opportunities, the goal is not to eliminate risk, but to weigh up the risks and benefits.
- Those providing play opportunities should focus on controlling the real risks, while securing or increasing the benefits.

Striking the right balance between protecting children from the most serious risks and allowing them to reap the benefits of play is not always easy. It is not about eliminating risk. Play is a safe and beneficial activity. Sensible adult judgements are all that is generally required to derive the best benefits to children whilst ensuring that they are not exposed to unnecessary risk. In making these judgements, industry standards such as EN 1176 offer bench marks that can help (HSE, 2012).

# Key Roles and Responsibilities

## Heads of Establishment

- School playground facilities are managed by the Head of Establishment.
- All expressions of interest in undertaking any playground improvement project must be submitted by the Head of Establishment.
- The Head Teacher is responsible for demonstrating that children, parents, and other key stakeholders have been appropriately consulted in the design of any playground improvement project.
- All liaison with the School Estate Planning Team, the Playground Development Support Group and other Council departments must be undertaken by the Head Teacher or a nominated senior member of the establishments leadership team.

## School Estates Planning Team

- The School Estates Planning Team within the Council's Communities and Families Service will provide a coordination role for all playground improvement projects
- All expressions of interest in undertaking any playground improvement project or queries concerning playground improvements generally should be submitted to the School Estates Planning Team ([playgrounds@edinburgh.gov.uk](mailto:playgrounds@edinburgh.gov.uk))
- The School Estate Planning Team will determine whether a project requires to be referred to the Playground Development Support Group (PDSG).

## Playground Development Support Group

An inter-departmental Playground Development Support Group (PDSG) has been established to advise and support the development of school playgrounds. All schools must refer to this group when planning and installing any play equipment including:

- climbing walls;
- multi-use games zones;
- sand-pits;
- astro-turf pitches;
- landscaping work.

# Playground Development Process

To ensure that any new playground development is compliant with Council standards and regulatory requirements, Heads of Establishments must be aware of and adhere to the following process for any playground improvement or development project within their establishment grounds.

## Planning for Change

Often the first step in planning for change is in response to work with the school Parent Council or a Community Group who wish to raise funds for a grounds improvement or development project, and the most successful projects are taken forward as a **partnership** between the school leadership team and that group. The Head of Establishment **must** ensure that consultations take place with children, parents, and other key stakeholders to inform the project. In the past individual Heads of Establishment have taken responsibility for the management and delivery of playground improvement projects, under the new guidelines most projects will be carried out by Council appointed contractors and/or the Council's Property and Facilities Management Service. Heads of Establishments will be responsible for the day to day management and health and safety of the completed facility or installations.

If the head Teacher is not leading the project personally, the Head Teacher must ensure there is a senior staff representative of the school to lead on liaising with the School Estate Planning Team, the PDSG, other Council services and the school Parent Council, and report to the Head of Establishment on a regular basis.

## STEP 1

### Expression of Interest

The school or Early Years establishment will be required to have *Expression of Interest* approval at the outset of the process to commission a new project. Approval must be received before any appointments are made, so that the appointments can be undertaken without exposing the Council or parent or community body to any liability issues.

Heads of Establishments **must** submit an *Expression of Interest* form (see attached Form 1) to the School Estate Planning Team ([playgrounds@edinburgh.gov.uk](mailto:playgrounds@edinburgh.gov.uk)) for **any** playground improvement or development project. This includes minor projects such as the placement of sheds, containers, benches, bins, and planters etc.

Heads of Establishments at PPP facilities should discuss the completion of the *Expression of Interest* form with the appropriate Estate Contracts Officer.

As part of the *Expression of Interest*, the school and Parent Council or community group must demonstrate that they have planned for all the project costs including (where applicable):

- Design team fees;
- Clerk of works fees;
- Project management fees;
- Delivery and Installation costs;
- Post installation inspection costs;
- Quarterly (operational) inspection costs;
- Costs associated with remedial action arising from inspections;
- Costs for ongoing and maintenance of surfaces, equipment and installations;
- Contingency;
- Any necessary signage;
- Other hidden costs associated with the project (for example: preparation of a plan which can be used when seeking funding from grant making bodies).

The *Expression of Interest Form* should provide full details of the source of funding for the project, including terms, conditions and constraints attached to that funding.

**Note:** many funding sources are time limited and the *Expression of Interest Form* should include details of any such constraints.

**Within 14 days of receipt of the *Expression of Interest* form the School Estate Planning Team will provide feedback.** This feedback will be either:

- Approval to proceed to next stage.
- Referral of the proposal to the Playground Development Support Group with details of the date when it will be considered (Head of Establishment may be invited to attend).
- A Request for further information.
- Refusal to proceed, outlining rationale for decision.

## STEP 2

### Commissioning and Procurement

Following receipt of Approval to proceed the Head of Establishment may, dependent on the scale of the project and advice received from the School Estate Planning Team:

- Procure items for installation/services according to standard procurement processes (see Council Contract Standing Orders document).
- Request that the School Estate Planning Team commission the project via Property and Facilities Management.

**Note: for major or more complex proposals the commissioning, procurement and design stages may take around a year.**

Where the services of a designer or design team are required the Head of Establishment or their nominated senior member of staff should liaise with the Council's **Senior Early Years Officer** to prepare a clear brief based on the school's requirements, including a Risk Benefit Assessment (see Form 2 - *Risk Benefit Assessment*).

Any funds raised by a Parent Council or community groups for the project must be transferred to the school following approval to proceed (this may have procurement, VAT, insurance and liability implications).

Where a commission is raised via Property and Facilities Management, the school will be required to provide a Cost Centre.

### **STEP 3**

#### **Design**

Any design work required will be undertaken by companies or individuals approved as part of the Council's Procurement Framework and/or appointed following a competitive tender process and will be appointed by Property and Facilities Management along with any other necessary professional services (for example Civil Engineers for drainage designs).

The design of all new playground developments at City of Edinburgh Council schools must be compliant with EN 1176 standards. This does not mean that only industry standard equipment can be used in playground developments, but it does mean that the design and installation of natural features and their associated surfaces must be compliant with the standards of EN 1176.

**All designs should reflect the principles and ethos of City of Edinburgh Council's *Vision for School Grounds* document.**

The designer must also ensure adherence to all relevant technical standards and ensure that:

- a clear strip (minimum 1.5m in width) is maintained around the school building to enable scaffolding to be erected so that gutter cleaning and the like can be undertaken easily.
- Emergency and service vehicle access and circulation of the grounds must be maintained

The Head of Establishment must ensure that proposals are shared with children, the Parent Council, the wider parent forum (and, where appropriate, the wider community), and that parent and pupil views are taken into consideration.

The proposed design and a Risk Benefit Assessment should be submitted to the School Estate Planning Team ([playgrounds@edinburgh.gov.uk](mailto:playgrounds@edinburgh.gov.uk)) who will provide the Head of Establishment with confirmation of the date when the proposal will be considered by the PDSG. As the manager with responsibility for the proposed design, the Head of Establishment may be invited to attend the relevant PDSG meeting.

At the meeting where the proposal is considered, the PDSG will either:

- Approve that the project progress to the “Build/Install” stage; or
- Conditionally approve that the project progress to the “Build/Install” stage; or
- Request further information; or
- Refuse the proposal, outlining the rationale for this decision.

## **STEP 4**

### **Build/Install**

Once the design has been approved and signed off by the PDSG, the School Estate Planning Team in liaison with the Head of Establishment will ask Property and Facilities Management to appoint a suitably qualified project manager and the associated costs will be assigned to the project budget.

The project manager will progress a procurement process to appoint a contractor who will be a company approved as part of the Council’s Procurement Framework and/or appointed following a competitive tender process.

The Head of Establishment should be aware that there are CDM (Construction Design and Management) regulations which will apply during the build, although these will be implemented by the project manager appointed by Property and Facilities Management. The Head of Establishment should discuss CDM requirements with the project manager.

The Head of Establishment is responsible for risk assessing and managing public access to the school or establishment grounds and the children’s use of the grounds during the build/installation process. Access arrangements, management of vehicle movements (contractor, staff and visitor), contractor compound areas and working times should be agreed between the Head of Establishment, the establishments Facilities Manager, the project manager and the appointed contractor. Where appropriate these arrangements should be shared with pupils, parents and establishment staff.

The project manager or an appointed Clerk of Works will ensure the work carried out by the contractor and any appointed sub-contractors is to standard set out in the plans.

## STEP 5

### Post Installation Inspection and Risk Assessment

**ALL** new school grounds landscaping, surfacing or equipment installations must undergo a post-installation inspection. The project will not be officially complete until an independent post installation inspection has been carried out (by RoSPA Play Safety or equivalent RPII Annual inspector) to ensure compliance with EN 1176 and any necessary remediation works necessary following this inspection have been completed.

The Post Installation Inspection cost must be met by the project.

Following notification from the Head of Establishment of the completion date for the project the School Estate Planning Team will book the post-installation inspection.

The Post-Installation report will be made available to the Head of Establishment and the School Estate Planning Team following its publication.

All playgrounds will also require that Heads of Establishments complete a *Health & Safety risk assessment* (see attached Form 3) prior to opening. This should incorporate any recommendations arising from the Post-Installation inspection and a *Health and Safety Action Plan* (see attached Form 4) put in place to carry out remedial actions as soon as possible.

The *Risk Benefit Assessment* (see Step 3) should be revised and updated with information from the *Health and Safety Risk assessment* and *Health and Safety Action Plan*.

Throughout the process children should be actively involved in the risk management measures.

All the above documentation should be submitted to the School Estate Planning Team BEFORE new school grounds landscaping, surfacing or equipment installations are opened for use by pupils or the public.

## STEP 6

### Introducing the Completed Installation

The Head of Establishment should prepare a plan in advance of the opening of the new facility to introduce the new facility, to children, parents and the whole school community. This should be discussed with the Play Development Officer.

## STEP 7

## Ongoing Inspection and Maintenance

The Head of Establishment should ensure that maintenance and playground supervision work plans are in place and that records of the following are maintained:

- Health & Safety Risk Assessment;
- daily visual check procedure;
- weekly recorded inspection;
- accidents occurring on or as a result of the new facility;

Quarterly (\*RPII Operational) and annual (\*RPII Annual) inspections will be arranged by the School Estates Planning Team. All associated costs, including any recommended maintenance actions or replacement/ removal recommended by the Inspector must be met by the school.

The Head of Establishment should ensure that, following inspection, an action plan is prepared to address any issues identified. This plan will be requested by the School Estate Planning Team within 14 days of the inspection. Failure to provide a plan demonstrating how inspection actions will be addressed may result in closure of the new facility until such time as an appropriate plan is provided or, where necessary, the remedial work has taken place.

Copies of Action Plans should be sent to the School Estates Planning Team ([playgrounds@edinburgh.gov.uk](mailto:playgrounds@edinburgh.gov.uk)).

## APPENDIX 1 - Inspection Schedule

- **Post Installation Inspection** by RoSPA or other approved inspector registered with the Register of Play Inspectors International (RPII) to confirm facility and installation conforms to EN 1176.
- **Annual Inspection** by RoSPA or other RPII approved inspector to check long-term compliance of installation and other areas of school grounds with required safety standards.
- **Quarterly Operational inspection** by RoSPA or other RPII approved inspector to check continued safe operation, stability, wear etc. of installation.
- **Weekly inspection** by establishment staff recording components inspected and any actions required (see Form 5) \*
- **Daily visual risk assessment** by establishment staff recording components inspected and any actions required (see Form 6) \*
- **Dynamic risk assessment** by supervising staff during use by children, with any required actions noted (Form 6) \*

\* Appropriate immediate actions or action plan must be put in place if defects are noted with the item taken out of use if necessary.

## APPENDIX 2 – School Playground Development Contacts List

All playground queries: [playgrounds@edinburgh.gov.uk](mailto:playgrounds@edinburgh.gov.uk)

### School Estate Planning Team:

Robbie Crockatt, Acting School Estate Planning Manager, Communities and Families

[robbie.crockatt@edinburgh.gov.uk](mailto:robbie.crockatt@edinburgh.gov.uk)

Julie Kelly, School Estate Planning Officer, Communities and Families

[Julie.kelly@edinburgh.gov.uk](mailto:Julie.kelly@edinburgh.gov.uk)

### Play Development Support Group:

Lynn Paterson, Senior Education Manager (Early Years), Communities and Families

[lynn.pateron@edinburgh.gov.uk](mailto:lynn.pateron@edinburgh.gov.uk)

Louise Caldwell, Senior Early Years Officer, Communities and Families

[Louise.caldwell@ea.edin.sch.uk](mailto:Louise.caldwell@ea.edin.sch.uk)

Alan Grevers, Technical Officer, Parks, Greenspace and Cemeteries

[Alan.Grevers@edinburgh.gov.uk](mailto:Alan.Grevers@edinburgh.gov.uk)

Murdo Macleod, Maintenance Standards Officer, Property and Facilities Management

[murdo.macleod@edinburgh.gov.uk](mailto:murdo.macleod@edinburgh.gov.uk)

Martyn Phillips, Health & Safety Adviser, Resources

[martyn.phillips@edinburgh.gov.uk](mailto:martyn.phillips@edinburgh.gov.uk)

Kevin McKee, Senior Legal Manager, Resources

[Kevin.mckee@edinburgh.gov.uk](mailto:Kevin.mckee@edinburgh.gov.uk)

### PPP contacts:

Calum Gordon, Operation Estates Contracts Manager, Communities and Families

[calum.gordon@edinburgh.gov.uk](mailto:calum.gordon@edinburgh.gov.uk)

Graeme Lawler, Operational Estates Contracts Officer, Communities and Families

[graeme.lawler@edinburgh.gov.uk](mailto:graeme.lawler@edinburgh.gov.uk)

Jennifer Black, Operational Estates Contracts Officer, Communities and Families

[jennifer.black@edinburgh.gov.uk](mailto:jennifer.black@edinburgh.gov.uk)

## APPENDIX 3

### Form 1 - Expression of Interest to Develop School Grounds

School Name	
Headteacher	
Phone Number	
Lead Person	
Lead Person's Email	
Date	
What is the proposed playground development concept? (What type of facilities are envisioned?)	
Which area in your grounds are proposed for development? Please attach a diagram showing scale and position in relation to buildings, perimeters, gateways and other features.	
What are your proposed timescales?	
Who has been involved in any consultation? e.g. Pupil/ HWB Group, Parent Council/PSA, Community Council, Local Business (detail who and how)	
What is your proposal for funding the project?	

How will you secure the funding for your playground future costs e.g. inspection and maintenance?

Have you currently raised/secured any funds, and if so how much?

£

Please return this form to School Estates Planning Team:  
[playgrounds@edinburgh.gov.uk](mailto:playgrounds@edinburgh.gov.uk)

**PDSG Feedback to School (*to be completed by the Play Development Support Group*):**

**PDSG Group – Compliance to EN 1176 Approved**

**Name:**

**Designation:**

**Signed:**

**Date:**

## APPENDIX 4

### Form 2 – Risk Benefit Assessment (edited from Play Safety Forum, Risk benefit Assessment)

#### Overview of Risk-Benefit Assessment

<b>Project/ proposal name:</b>			
<b>Type of assessment (<i>tick one box</i>):</b>	<i>Designer</i>	<input type="checkbox"/>	
	<i>Provider/manager</i>	<input type="checkbox"/>	
	<i>Post-installation</i>	<input type="checkbox"/>	
	<i>Monitoring</i>	<input type="checkbox"/>	
<b>Assessor:</b>	<i>Name</i>		
	<i>Position</i>		
	<i>Date</i>		
<b>Description and location of facility, feature, activity or equipment:</b>			
<b>Date to review risk-benefit assessment:</b>			
<b>Signature of senior worker/manager:</b>			

**Main Form: Risk-benefit assessment**

<b>Benefits:</b>	
<b>Risks</b> ( <i>taking into account any technical information identified in the supplementary form below</i> ):	
<b>Local factors:</b>	
<b>Precedents &amp;/or comparisons:</b>	
<b>Decision:</b>	
<b>Actions taken:</b>	
<b>Ongoing management and monitoring:</b>	

**Supplementary Form: Knowledge and/or specialist expertise needed (if any) for this risk-benefit assessment**

Use this table to give information about any additional specialist or technical expertise that is felt to be necessary. In some circumstances, no such input will be needed. If this is the case, a suitable note such as 'none applicable' or 'N/A' should be made in the table (which should otherwise be left blank). In other circumstances, such as those involving bespoke structures or unusual sites, specialist input may be appropriate. Such expertise might, for example, cover the following topics: trees, structural engineering, rope specialisms, water, soil, EN standards and maintenance. In rare cases, other areas of expertise may also be needed. Ensure that relevant information is noted above in the main form.

Knowledge or specialism	Person providing the knowledge/ carrying out the assessment	Any checks carried out and actions proposed

## APPENDIX 5

### Form 3

### RISK ASSESSMENT

Department		Unit/Section	
Date of assessment		Assessor(s)	
What is the activity?		Where is the activity carried out?	

What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Action by whom?	Action by when?	Done

--	--	--	--	--	--	--

What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Action by whom?	Action by when?	Done

Manager's name		Signature	
Date		Assessment review date	

**Are other specific risk assessments required?**

Asbestos	<input type="checkbox"/>	Control of Substances Hazardous to Health	<input type="checkbox"/>	Display Screen Equipment	<input type="checkbox"/>
Electricity	<input type="checkbox"/>	Fire Safety	<input type="checkbox"/>	Lone Working	<input type="checkbox"/>
Manual Handling	<input type="checkbox"/>	New and Expectant Mothers	<input type="checkbox"/>	Noise	<input type="checkbox"/>
Personal Protective Equipment	<input type="checkbox"/>	Stress Management	<input type="checkbox"/>	Vibration	<input type="checkbox"/>
Work Equipment	<input type="checkbox"/>	Workplace Health, Safety and Welfare	<input type="checkbox"/>	Working at Height	<input type="checkbox"/>

## APPENDIX 6

Form 4 Playground Health & Safety Action Plan

School:

Item	Activity/ Hazard	Recommendation	Actions	Action Owner	Target Date	Status Date
Item	Activity/ Hazard	Recommendation	Action taken	Action Owner	Target Date	Status Date

KEY: STATUS

	Not started
	In progress / on track/ ongoing
	Overdue
	Completed
	EN standard covered off in previous recommendations

## APPENDIX 7

### Form 5 – Example Weekly Check

School:

**Weekly Check** – Monday morning after the weekend

Date:

Completed by:

Weather/ conditions:

Area of Playground being inspected (examples)																			
	Tunnel under slide		Amphitheatre		Football pitch		Rocks and path to field		Sandpit by P4/5 door		Tyre wall		Climbing wall		Boat Astro turf		Upper Trim Trail		
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
<b>Structure:</b> bent, cracked, loose, broken, rotten																			
<b>Surface Finish:</b> rust, corrosion, sharp edges,																			
<b>Fixtures:</b> missing nuts, bolts, loose nuts or bolts, broken or worn																			
<b>Exposed Mechanisms:</b> hooks, links,																			
<b>Moving Parts:</b> worn ropes,																			

seized, lubrication																		
<b>Seats:</b> missing, wear																		
<b>Surfacing:</b> depth, wear																		
<b>Loose Play</b>																		
<b>Date</b>	<b>Action required</b>																	





## APPENIDX 9 – EN 1176

The full Standard (EN 1176) is an extensive document published in seven parts:

**Part 1:** General safety requirements and test methods

**Part 2:** Additional specific safety requirements and test methods for swings

**Part 3:** Additional specific safety requirements and test methods for slides

**Part 4:** Additional specific safety requirements and test methods for runways

**Part 5:** Additional specific safety requirements and test methods for carousels

**Part 6:** Additional specific safety requirements and test methods for rocking equipment

**Part 7:** Guidance for installation, inspection, maintenance and operation

### EN 1176 : GENERAL REQUIREMENTS (From RoSPA Play Safety)

#### MINIMUM SPACE AROUND EQUIPMENT AND ZONES

\* This is intended to reduce the likelihood of collisions

#### Protection against injuries in the free space

\* No obstacles in the minimum space (other than structures to assist or safeguard the user)

\* Traffic flows should not go through the minimum space

#### Protection against injuries in the falling space

\* Free height of fall should not exceed 3m

\* No obstacles in the falling space

\* Platforms with fall heights of more than 1m between them require surfacing

#### Protection against injuries due to other types of movement

\* No unexpected obstacles

#### SURFACING SAFETY REQUIREMENTS

\* Surfacing should have no sharp edges or protrusions

\* Loose fills should be 200mm more than the depth required to meet the HIC reading (usually 100mm) = 300mm

\* Hard surfaces should only be used where the fall height is not over 600 mm and where there is no forced movement

\* Testable Impact absorbing surfaces if falls over 600mm are possible. Topsoil or turf may be used up to 1.5 m

\* Impact absorbing surfaces (IAS) must extend for a minimum of 1.5m clear space all around a fall height over 600m, extending with height

#### DESIGN AND MANUFACTURE

\* The equipment must be suitable for the user and risks should be identifiable by the child

\* Accessibility: adults must be able to gain access to help children

\* Grip requirements: permitted diameter 16 - 45mm (e.g. overhead bars)

\* Grasp requirements: maximum diameter 60mm (e.g. handrails on steps)

\* Easily accessible equipment has stricter requirements

#### FINISHING

\* Timber species and synthetics should be splinter resistant

\* No protrusions or sharp edged components

\* Bolts (*and natural object nibs or protrusions*) should not protrude by more than 8mm

- \* Corners, edges or projecting parts over 8mm should have a 3mm radius (*including natural objects such as logs or boulders*)
- \* No hard and sharp-edged parts (i.e. razor blade effect caused by sheet steel)
- \* No crushing or shearing points
- \* Connections should not come loose by themselves and should resist removal
- \* Timber connections should not rely solely on screws or nails
- \* Leaking lubricants should not stain or impair the safety of the equipment

## **ROPES**

### **Fibre ropes**

- \* Conform to EN 701 or 919 or have a material and load certificate
- \* Ropes used by hands shall have a soft, non-slip covering

### **Wire ropes**

- \* Non-rotating and corrosion resistant with no splayed wires outside the ferrule
- \* Wire connector clip threads should protrude less than 8mm
- \* Turnbuckles should be enclosed, have a loop at each end and be secured

### **Chains**

- \* Maximum opening of individual links: 8.6mm in any one direction
- \* Connecting links between chains must be less than 8.6mm or over 12mm

### **Swinging suspended ropes**

- \* Not combined with swings in the same bay
- \* Less than 2m long: over 600mm from static parts; over 900mm from swinging parts
- \* 2m - 4m long: over 1000mm from anything \* Diameter: 25 - 45mm

### **Climbing ropes**

- \* Anchored at both ends and movement less than 20% of rope length
- \* Single climbing rope diameter: 18 - 45mm (nets comply with Grip requirements)

## **ENTRAPMENTS**

- \* Entrapment: a place from which children cannot extricate themselves unaided  
[There are several probes: the Torso Probe, the Small Head Probe, the Large Head Probe, the Wedge (fish) Probe and the two Finger Rods. There is also a toggle test to reduce the dangers of clothing toggles being caught on slides, fireman's poles and roofs.]

### **Bridges**

- \* The space between the flexible bridge and rigid sides should be not less than 230mm

### **Entrapment of feet and legs**

- \* Inclined planes (not suspension bridges) less than 45° should have no gaps over 30mm
- \* There are no requirements for suspension bridge gaps other than the main entrapment requirements

### **Finger entrapments**

These occur in: 1. gaps where child's movement may cause a finger to become stuck; 2. open-ended tubes; 3. moving gaps

- \* Tube ends should be securely enclosed and removable only with tools
- \* Moving gaps should not close to less than 12mm

## **BARRIERS AND GUARD-RAILS**

- \* Hand-rail: a rail to help the child balance
- \* Guard-rail: a rail to prevent children falling
- \* Barrier: a guard-rail with non-climbable in-fill

### **Hand-rails**

- \* Where required they should be between 600 and 850mm above the standing surface

### **Easily accessible equipment**

- \* Platforms over 600mm require a barrier with a minimum height of 700mm high + impact absorbing surfacing

### **Equipment that is not easily accessible**

- \* Platforms up to 1000mm: No barriers or guard-rails required + impact absorbing surface over
- \* Platforms 1000-2000mm: 600 - 850mm high guard-rail + impact absorbing surfacing
- \* Platforms 2000-3000mm: 700mm high barrier + impact absorbing surfacing
- \* No bars, infills or steps which can be used as steps. Tops should discourage standing or sitting

## **MEANS OF ACCESS**

All means of access should have no entrapments; be securely fixed; be level to  $\pm 30$  (ramps across width) and have a constant angle. It does not refer to agility equipment used as an access i.e. arched climbers, scramble nets. There are specific measurements for ladders, stairs and ramps.

## **SWINGS**

### **Requirements**

- \* No all rigid suspension members (i.e. solid bar top to bottom)
- \* Design should be principally for use by seated children (RoSPA interpretation)
- \* Two seats per bay maximum. Cradle and flat seats can be mixed in the same bay, but ensure this is suitable
- \* Some types of swings have slightly different requirements . Information should be obtained from the supplier
- \* Single points swing chains should not twist round each other
- \* Single point swings require a secondary bearing support mechanism if the bearing is not designed for swings

### **Dimensions**

- \* Minimum ground clearance at rest: 350mm (400mm for single point swings and tyres)
- \* No maximum seat surface height but RoSPA recommends a max. height of 635mm for cradles and flat seats
- \* Distance between seat and frame: 20% of swing suspension + 200mm
- \* Distance between seats: 20% of the swing suspension + 300mm
- \* Pivot splay (separation distance) at crossbar: width between seat fixings plus 5% of swing suspension length (20% for contact swings)

### **Siting**

- \* Swing sets for young children should be separated from those for older children and sited to avoid cross traffic

## Surfacing requirements

### *Forward and Back*

\* Different areas for synthetic and loose-fill surfaces in a box or pit. Measurements each way are:

1. synthetic: .867 x length of suspension member + 1.75m + 0.50m clear space
2. loose-fill: .867 x length of suspension member + 2.25m + 0.50m clear space

### *Side width*

- \* Seat width no greater than 500mm: 1.75m minimum (i.e. 0.875m each way from seat centre)
- \* Areas for two seats in one bay may overlap providing the distance between seats is correct

### *Single point swings*

- \* Circular area with a radius equal to the Forward and Backward figure for other swings

## SLIDES

### Safety requirements

\* Free-standing slides: the max. vertical height which a stairway can reach without a change of direction is 2.5m.

\* Starting section at the top of each chute: length 350mm minimum, zero to 50 downwards at the centre line. **N.B.** This can be the platform if the slide is attached to it

\* If the starting section is over 400mm long, platform requirements apply

\* From a platform, the gap to the slide is the same width as the slide

\* Attachment slides over 1m free fall height should have starting section barriers 500mm min. high at one point

\* Attachment slides over 1m FFH should have a guard-rail across the entrance at a ht. of between 600-900mm

### *Sliding sections*

\* Maximum angle: 60° at any one point and an average of 40°

\* The width of open and straight slides over 1500mm long should be less than 700mm or greater than 950mm

\* Spiral or curved slides should have a width less than 700mm

### Run-outs

\* Run-outs of at least 300mm are required if the sliding section is under 1.5m long.

\* Additional requirements are required for different types of slides

\* Average angle of run-outs: type 1 is 100°, type 2 is 50° (both downwards)

\* Height of run-out: Less than 1.5m sliding length: max. 200mm. Greater than 1.5m sliding length: max. 350mm

\* Users should come to a stop on the run-out section (type 2 only)

\* Chutes should have a side height related to the fall height:

1.2m: 100mm minimum : 1.2m - 2.5m: 150mm minimum : Over 2.5m: 500mm minimum

\* Maximum side angle from slide bed: 30°

\* Tops of sides should be rounded or radiused to at least 3mm

\* Tunnel slides should be a minimum 750mm high and 750mm wide

\* Tunnels should start on or at the end of the starting section and be continuous over the sliding section only

### Surfacing requirements

Normal distances except for the run-out which should be:

\* *Type 1*: 1m each side and 2m beyond

\* *Type 2*: 1m each side and 1m beyond

## CABLE RUNWAYS

### Safety requirements

- \* Stop at end should progressively slow down the traveller
- \* Traveller should not be removable except with tools
- \* No access to internal mechanism
- \* Suspension mechanism: flexible, exclude risk of strangulation or be at least 2m above the ground in the middle
- \* Where children hang by the hands, the grip should not be enclosed (e.g. a loop)
- \* Climbing should be discouraged onto the grip
- \* Children should be able to get off the seat at any time (i.e. no loops or straps)
- \* Maximum loaded (1 x 130 kg adult) speed is 7m per second
- If two cables are placed parallel the min. distance between them is 2m

### Impact areas

- \* 2m either side of main cable

## ROTATING ITEMS

**Note:** Rotating items under 500mm diameter are excluded from these requirements

### Safety requirements

- \* Maximum free height of fall: 1000mm (For overhead items: 1500 - 3000mm)
- \* Hand grips should be between 16 - 45mm

### Specific requirements

There are specific requirements for different types of roundabout . The two most common ones are:

#### *Platform roundabouts:*

- \* Platforms should be circular and enclosed
- \* All parts should revolve in the same direction
- \* No super-structure over the edge of the platform
- \* Mechanism should be enclosed
- \* Height between underside and ground 60 - 110mm for 300mm inwards, then at least 60 mm for the remainder
- \* Protective skirts should be of rigid material and have no burrs or other defects
- \* The bottom edge should be flared towards the inside or protected

#### *Giant revolving discs*

- \* Clearance of underside at lowest point: 300mm
- \* Max. platform height: 1m
- \* Free space: 3m
- \* Upper surface should be continuous, smooth and with no handles or grips
- \* Underside should be continuous, smooth and without any radial variations (i.e. spokes) or indentations

### Minimum space

- \* Free space: Horizontal: 2m all round
- \* Vertical head clearance from platform: sitting 1.5m ; standing 1.8m
- \* Small rotating items under 500mm diameter are excluded but RoSPA suggests as for rocking items

### Surfacing requirements

- \* There are no special extra requirements for surfacing areas
- \* Surfaces should be continuous underneath and level

## ROCKING ITEMS

### Definitions

- \* Rocking equipment which can be moved by the user and is supported from below
- \* Damping: any movement restricting device. (N.B. Springs are treated as self-damping)

### Safety requirements

- \* Throughout the range of movement gaps in all accessible joints should be under 12mm
- \* Progressive restraint at extremity of movement is required
- \* Foot rests should be provided where the ground clearance is less than 230mm
- \* Hand grips should be provided for each seat or standing position
- \* Foot rests and hand grips should be firmly fixed and non-rotating
- \* Hand grip diameter: 16 - 45mm (for toddler items: 30mm maximum)
- \* Right-angled corners on moving equipment should be 20mm radius min. (i.e. a bird's beak)

### Minimum space

- \* 1000mm between items at maximum movement.

### Surfacing requirements

There are no special extra requirements for surfacing areas

## INSTALLATION, INSPECTION, MAINTENANCE AND OPERATION

### Safety

- \* Appropriate safety systems must be established by the operator
- \* No access should be allowed to unsafe equipment or areas
- \* Records should be kept by the playground operator
- \* Effectiveness of safety measures should be assessed annually
- \* Signs should be provided giving owner details and emergency service contact points
- \* Entrances for emergency services should be freely accessible
- \* Information on accidents should be kept (RoSPA has a suitable form)
- \* Staff and users should be safe during maintenance operations

### Inspection

- \* Manufacturers will recommend the inspection frequency although some sites may need a daily check

#### *Frequency*

Routine visual inspections: identification of hazards from vandalism, use or weather conditions (RoSPA recommends a recorded daily or weekly inspection)

Operational inspection: every 1-3 months or as recommended. Checks operation, stability, wear etc.

Annual main inspection: checks long-term levels of safety

- \* An inspection schedule should be prepared for each playground, listing components and methods
- \* Appropriate action should be taken if defects are noted

### Routine maintenance

- \* Basic routine maintenance details should be supplied by the manufacturer

### Corrective maintenance

- \* This covers remedial work and repairs as required
- \* Alterations should only be carried out after consultation & agreement with the supplier or a competent person

(Adapted from EN 1176 General Requirements, RoSPA Playground Safety)

## **APPENIDX 10 – Links to further information**

Further essential information on **EN 1176** specifications, with details of heights, fall zones and safer surfacing areas, are explained in '*An Essential Guide to BS EN 1176 and BS EN 1177, Children's Playground Equipment & Surfacing: updated for 2008*' (Davies and Heseltine, Wicksteed, 2008) which is available on line:

<http://www.wicksteed.co.uk/pdfs/EN1176%20and%20EN1177.pdf>

A booklet is available from **RoSPA**, (£12.00 plus £3.50 post and packing), which attempts to explain in everyday terms for the interested lay person the main new requirements and to identify changes from the old British (BS 5696) and German (DIN 7926) standards where these may be assessed on site.

<http://www.rospa.com/play-safety/advice/en1176-equipment-standard/>

For more information on **Loose Parts Play** see the Loose Parts Play Toolkit at:

<http://www.inspiringscotland.org.uk/media/58451/Loose-Parts-Play-web.pdf>

**HSE Statement** - Children's Play and Leisure: promoting a balanced approach

<http://www.hse.gov.uk/entertainment/chilids-play-statement.htm>