



Nature play: Maintenance guide

Lisa Davis, Adam White and Jane Knight

Play England

Play England aims for all children and young people in England to have regular access and opportunity for free, inclusive, local play provision and play space.

Play England provides advice and support to promote good practice, and works to ensure that the importance of play is recognised by policy-makers, planners and the public. For further information visit www.playengland.org.uk.

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- promote positive images of children and young people
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NCB, 8 Wakley Street, London EC1V 7QE

Tel: 020 7843 6000

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Front cover image: Play England, Paul Upward – Playscape at RHS Hampton Court Palace Flower Show

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Lisa Davis

Lisa Davis is Policy Officer at Play England. Lisa has produced a range of materials to support the development of play space.

ldavis@ncb.org.uk

Adam White CMLI

Adam White is Principal Landscape Architect for the environmental charity Groundwork London. He has won a Royal Horticultural Society (RHS) Gold Medal, BBC People's Choice Award and Landscape Institute Design Award for his innovative 'Playscape' approach to play space design. Adam is a CABI Space Enabler, Green Flag Judge, Horticultural Weekly Award Judge and Design Ambassador for the Homes & Communities Academy. Adam is also the chair of the Groundwork UK Landscape Architects Forum.

adam.white@groundwork.org.uk

Jane Knight

Jane Knight is the Landscape Architect for the Eden Project.

jknight@edenproject.com

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Foreword

The government's playbuilder capital programme aims to create 3,500 new or refurbished children's play areas across England by 2011. Play England is proud to have been appointed as the government's national delivery partner for this and the wider Play Strategy of which it is a part.

Our role is not just to help local areas to expand and revitalise their play provision. It is to raise standards too. A depressing feature of much public provision is the absence of natural features, and the separation of sites from their surrounding landscape. These 'kit, fence and carpet (KFC)' playgrounds, even though often situated within beautiful parks and green spaces, contrive to remove children at play from the environments that research – and common sense – tells us is best for them.

Our *Design for Play* guidance (Shackell and others, 2008), adopted by the government as the quality benchmark for the new investment, sought to raise the bar and show that, wherever practicable, natural features and integrated landscaping should be central to good play areas. But this aspiration is not without its challenges. Public play areas need to be robust and easy to maintain. These considerations are important and this guidance aims to supplement *Design for Play* by exploring them in more detail, offering further suggestions and providing examples of what can be achieved – without breaking the budget.

Children need and deserve to enjoy play spaces that are as natural as we can make them. And the environment needs future generations to love and appreciate it.

This is important work. Enjoy.

Adrian Voce

Director, Play England

Endorsement

Natural England

There is now compelling evidence that natural features can enhance play, and therefore children's development. This guide will prove invaluable in helping to make this happen on the ground. The opportunity for children and families to get a daily dose of nature at their local play space will be a massive step forward in enhancing the environmental literacy of future generations that will need to face up to tackling climate change and its consequences.

Guy Thompson

Executive Director

Introduction

Children play in many different types of wild and semi-wild places. These include pocket parks, village greens, urban and rural commons, verges, school grounds, recreation grounds, parks, country parks, field boundaries, fields, woods, forests, heaths, moors, wetlands, riversides, streams, canal towpaths, access lands and coasts and beaches. These spaces are all important in offering children and young people access to nature. Play contributes to all the Every Child Matters outcomes. Children's Trusts and their partners are now expected to deliver excellent outdoor play opportunities for all children; planning and maintaining public space to promote communities that are more child-friendly (DCSF, 2008b). Research shows that for children to derive most benefit, these opportunities should include natural features. Offering children a non-uniform, non-standardised play environment and promoting their engagement with the natural world should be a primary aim for providers.

The aim of this guide is to support local authorities, housing associations, parks and others with responsibility for introducing nature play opportunities into designated parks and play spaces.

Together with the government departments leading on play, Play England has published two guides to support local authorities in England

who are building/refurbishing play areas as a result of the government's Play Strategy capital funding programme. These include:

Design for Play: A guide to creating successful play spaces

The guide advocates a design-led approach based on 10 principles for creating imaginative, innovative and stimulating play spaces that:

- are bespoke
- are well located
- make use of natural elements
- provide a wide range of play experiences
- are accessible to both disabled and non-disabled children
- meet community needs
- allow children of different ages to play together
- build in opportunities to experience risk and challenge
- are sustainable and appropriately maintained
- allow for challenge and evolution.

Managing Risk in Play Provision: Implementation guide

This guide outlines a new approach to risk management called risk-benefit assessment, which is endorsed by the Health and Safety Executive (HSE) and RoSPA.

This guide will often refer to these documents.

'As we allocate new capital funding into local authorities, we will ask for reassurance that councils will take measures to ensure investment is sustainable, in terms of protection of sites against vandalism and ongoing maintenance of sites. We want our new investment to create sites that use natural materials and environments, but we also need to see durability.' (DCSF, 2008a)

In addition to these two documents, the disabled children's charity KIDS, has produced *Inclusion by Design: A guide to creating accessible play and childcare environments* (Goodridge, C and Douch, P 2008), which outlines six principles of inclusive design and touches on inclusive management.

Some play providers may need to adopt a different approach to the delivery, management and maintenance of play spaces in order to implement these design principles.

Play spaces that incorporate natural features may be more complex to maintain than fixed equipment sites, and natural play features are not necessarily covered by industry standards. Risk-benefit assessment is the primary tool for making judgements, and additional skills and expertise may also be needed to maintain these play

spaces. However, this does not mean that maintenance is always more complicated, once the basic approach is understood.

Local authorities can help ensure that children and young people have access to nature play by introducing relevant features into local authority parks and play areas. When talking about nature play within this guide, we are referring to spaces managed by the local authority, often through the parks department, countryside service or via registered social landlords.

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Nature play can be introduced into new play spaces or incorporated into established ones. It should be understood as part of the wider landscape, of which play forms an integrated part. Nature play involves introducing elements such as planting, sand, boulders or tree trunks, trees and any natural surfaces that the provider may decide to incorporate into an established play park or playground.
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About this guide

This guide aims to support local authorities in introducing nature play into their play spaces according to the design principles outlined in *Design for Play: A guide to creating successful play spaces*. The guide will:

- highlight the need for commissioners and designers to consider the management and maintenance implications at the start and throughout the development of a new play space
- identify procedures to support the ongoing maintenance of these play areas
- ensure that consideration is given to ongoing revenue funding for maintenance, repairs or replacement.

Who is this guide for?

This guide is for all those involved in providing and managing play provision, especially unstaffed public play areas, in particular:

- commissioners and designers of play space
- maintenance staff
- local residents, parents, volunteers or anyone else who may wish to be involved in creating, improving and maintaining places where children and young people can play and spend their free time.

The guide is divided into five sections:

Section 1 examines how to create a framework to support nature play and its ongoing maintenance.

Section 2 identifies a range of procedures that can be used to support the maintenance of play spaces.

Section 3 identifies specific materials that often feature in nature play and provides information on how to maintain them.

Section 4 provides an in-depth case study looking at specific maintenance issues of

Jubilee Way Playspace, in the Royal Borough of Kingston upon Thames.

Section 5 gives signposts to further information.

Appendix A provides a maintenance summary for natural features.



The introduction of nature play can improve biodiversity and consequently improve children's and young people's interaction with nature through play. *Biodiversity by Design: A guide for sustainable communities* (Town and Country Planning Association, 2004) aims to provide guidance on how to maximise the opportunities for biodiversity in the planning and design of sustainable communities. In addition, *Making Contracts Work for Wildlife: How to encourage biodiversity in urban parks* (CABE Space, 2006) focuses on the practical aspects of encouraging biodiversity in parks and green spaces.

This guide is to be used in conjunction with *Design for Play: A guide to creating successful play spaces* and *Managing Risk in Play Provision: Implementation guide*.

Section 1

Natural play space development

Play policy

Nature play should be available as part of the range of playable space provided in a local authority. Providing play opportunities is the responsibility of the Local Strategic Partnership. This is agreed government policy as outlined in statutory guidance for children's trusts on inter-agency cooperation to improve well-being of children, young people and their families (DCSF, 2008b).

An agreed play policy, which describes the local authority's aims for the provision of play, is fundamental to providing successful play spaces. A play policy should make reference to providing for nature play and the maintenance of natural play spaces.

Nature play is important because it can:

- provide contact with the living and non-living features of the natural environment
- connect children and young people with the nature and biodiversity of the local environment
- help demonstrate seasonal change
- encourage the use of all the senses
- provide natural objects to play and be creative with, such as leaves, seeds and bark.

Play, Naturally: A review of children's natural play (Lester and Maudsley, 2007) provides a

comprehensive review of the values and benefits of children's play in natural settings.

This should be linked to the local *Open Space Strategy* as outlined in *Planning Policy Guidance 17: Planning for Open Space, Sport and Recreation* (CLG, 2002) and to the *Children and Young People's Plan Guidance 2009* (DCSF, 2009). Local authorities should also consider Local Area Plans (LAPs) and Section 106 Planning Gain for the development and maintenance of play space.

Agreeing a play policy requires setting clear objectives, and then applying them to specific sites and services. It will include judgements about the importance of the play provision and what it is trying to achieve, and a statement on the provider's approach to risk and challenge in play provision. This policy framework is essential because it helps to ensure that different people within an organisation all work together to achieve a coordinated approach.

Most unitary, district and borough authorities already have local play policies or local area play strategies. County councils, which, along with unitary authorities, are receiving money from the government as part of the national Play Strategy (DCSF, 2008c), are increasingly coordinating with district and borough councils over play provision.

Imagine a play space maintained for play value and environmental sustainability

'Good play spaces are designed and constructed using recycled or sustainably sourced materials. Long-term maintenance and sustainability are also vitally important considerations in the design process, but in successful play spaces do not overshadow the scheme's play value and ability to meet the play needs of children and young people. Good play spaces are designed and constructed bearing in mind sustainability but they are not necessarily tidy, and bits of scrub or long grass, fallen leaves and twigs, may all provide additional play opportunities.' (Shackell and others, 2008)

Thinking about maintenance throughout the design cycle

Considering maintenance at the commissioning and design stage

Design for Play identifies six stages of the design cycle for the creation of successful play spaces. Stage 5 is concerned with ensuring that maintenance is planned as a central aspect of the design.

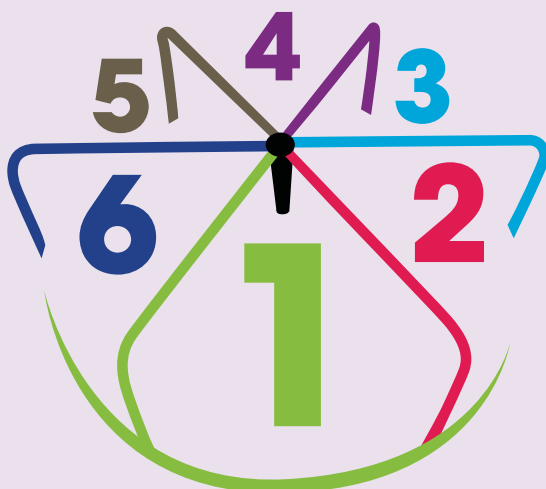
A good standard of maintenance is essential for the long-term sustainability of play spaces. The maintenance options and costs should be analysed at the start of a project to ensure that adequate resources are available and the design of the new play space is tailored accordingly. This includes everything from litter-picking to checking for hazards and replacing equipment and features. Resources will often be needed to allow for adjustments once designs are implemented. The case study, Jubilee Way Playscape, demonstrates how maintenance

prescriptions have evolved over the first year, with input from designers, maintenance staff and users (page 20).

It is good practice for commissioners and designers to work with maintenance teams and, where possible, wildlife specialists or ecologists, during the development of the design. It is important to take time at the design and development stage to explain the play value of items such as boulders, long grass and digging areas, as some people may not have seen these used inside play spaces before, and may worry about children hurting themselves and about the long-term sustainability of these areas.

There is clearly a need for dialogue between commissioners, designers and maintenance teams, which needs to be sustained throughout the design cycle. Consider using *Spaceshaper* (CABE Space, 2007), a consultation tool, which brings together those who use a space with those who manage and care for it.

The design cycle



Design for Play outlines six stages of the design cycle for creating imaginative, innovative and simulating play spaces, these are:

.....
Stage 1: Prepare

Stage 2: Design

Stage 3: Construct

Stage 4: Use

Stage 5: Maintain

Stage 6: Review

Commissioners need to consider the establishment of natural play features such as plants, trees, water and grass, especially in the first year. They should consider incorporating into any tender a maintenance contract, which could include regular visits, watering if necessary, and replacement of damaged features. The establishment phase is important to the long-term viability of play spaces.

What level of maintenance is required?

Some wear and tear in parks and play spaces is inevitable and is a sign of a popular and successful play space. Play spaces do not have to be neat and tidy. Long grass and sandy areas will provide immense play value, whilst worn areas of grass around seating areas just prove that a park is well used. A risk-benefit assessment can help providers make decisions relating to the use of grass, sand and other natural materials or features.

Involving the local community in long-term maintenance

It is important to convey to the local community the intended level of maintenance and to manage expectations at an early stage. The *Neighbourhood Play Toolkit* (Children's Play Council, 2006), currently being revised and will be available late 2009, offers advice on involving the local community and community-led projects.

There are many examples of communities accessing funding to build or improve a play area. In some areas the local authority has worked with the community, making agreements about their possible involvement in managing and maintaining play spaces, either wholly or in part, depending on their resources and expertise. However, as maintenance is crucial for health and safety reasons, it is important to agree on who has overall responsibility for the site.



Wyvis Street Play Space, Tower Hamlets

Design for Play notes the example of Wyvis Street Play Space. The scheme includes an open sandpit. A local resident who was previously sceptical about provision of sand became one of its strongest advocates. This resident now checks the sandpit regularly to make sure it is safe for children to use.

Section 2

Procedures to support the maintenance of nature play

Those who provide play spaces have legal responsibilities under the Health and Safety at Work etc Act 1974 and the Occupiers Liability Acts 1957 and 1984. Regulations impose a legal duty on providers to carry out a suitable and sufficient assessment of the risks associated with a site and act accordingly¹. However, the following procedures could be used to support the maintenance of play spaces:

- maintenance plans and schedules
- risk–benefit assessments
- inspection programmes
- maintenance records
- evaluation and review.

Maintenance plans and schedules

Maintenance plans and schedules can be drawn up by the provider, designer and maintenance manager and can include:

- a master plan or development concept plan, or working drawings with a rationale for the design intentions of play spaces
- features and assets of the play space
- details of the age and features of equipment and its associated maintenance schedule and any past maintenance history
- audit reports, including any modifications and repairs carried out
- details of how often different natural features are to be maintained
- information about ground surfaces, recommended material, depth of loose-fill and when it was last replenished, suppliers, maintenance and inspection procedures.

An understanding of the design intentions, together with the particular requirements of the risk–benefit assessment, and a regular programme of inspections, will form the basis of the maintenance schedule.

Although nature play will evolve over time, maintenance staff and management bodies should understand the original purpose and the design intentions of a play space before any modification, redesign or maintenance is carried out.

A maintenance schedule should be drawn up at the design stage but reviewed every six months so it can be updated with the changing needs of the play space.

‘Through play, children are able to learn about risks and use their own initiative. If children and young people are not allowed to explore and learn through playing and taking part in positive activities, they will not learn how to judge risks and manage them for themselves. These skills learnt through play and other activities can act as a powerful form of prevention in other situations where children and young people are at risk.’
(Shackell and others, 2008)

¹ More information on the legal and policy context of risk management in play provision can be found in *Managing Risk in Play Provision: Implementation guide* (Chapter 2).

Risk–benefit assessments

Adopting a common sense attitude to maintenance issues is important. To be effective, it is important that the risk–benefit assessment outlined in *Managing Risk in Play Provision: Implementation guide* is underpinned by a local play policy that describes the organisation’s approach to risk and challenge in play. The risk–benefit assessment will provide a means of describing providers’ decisions and judgements that is both reasonable and transparent, and is likely to include comments on management and maintenance that will feed into the maintenance plan and schedule.

Inspection programmes

An inspection is a detailed and careful examination of the outdoor play space as a whole. Inspections assist in ensuring the safety of the play space and in identifying non-routine maintenance requirements.

Playground managers are expected to undertake a hierarchy of inspections:

- Routine visual inspections - Identification of hazards from vandalism, use or weather conditions; RoSPA recommends a recorded daily or weekly check depending on which is appropriate to the play space.
- Operational inspection - Checks for operation, stability and wear. This should be carried out every one to three months or as recommended by the designers, suppliers or installers.
- Annual inspection - Technical check of equipment or features for long-term wear. This could be carried out by an independent specialist or qualified engineer. A technical inspection is different from a risk–benefit assessment, though the results of a technical inspection will feed into the wider assessments.

Jubilee Way Playscape

Jubilee Way Playscape is maintained by a contracted maintenance service provider, for the Royal Borough of Kingston upon Thames. The contractor’s inspection team, who are trained Level 1 Playground Inspectors, inspect the equipment on a daily basis whilst carrying out daily maintenance tasks. This information is fed back to the client, designer and commissioner in the first year.

Further monthly inspections are carried out by the sub-contracted inspection and maintenance team, which gives feedback to the contractor, the client, the designer and commissioner in the first year.





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Maintenance records

Records should be kept of all maintenance work and inspections. It is recommended that this documentation be retained for a specified time (often at least 15 years), which should be confirmed with the local authority legal department.

‘Designing for play is an ongoing process. Successful play spaces are not simply ordered from a catalogue, put in the ground and left. They require careful thought and planning, continuing care and maintenance, and should be reviewed and updated periodically to make sure they provide the best possible play opportunities for children and young people.’ (Shackell and others, 2008)

Evaluation and review

Evaluating and reviewing how well a play space is working and if it is delivering play value is one of the most important stages in its development.

Design for Play: A guide to creating successful play spaces states that one key characteristic of a successful play space is an element of flexibility in the layout. The space should allow for change and evolution – allowing children to adapt it to their own needs. In addition, ongoing activities like den building or play ranger projects will add huge play value. Ideally, funds will have been set-aside in the budget to allow for change and ongoing development. Where this has not been agreed, a process for securing the ongoing maintenance should be included in the project plan.

Section 3

Nature play: maintenance issues

In order to examine the maintenance issues in nature play we have identified a number of materials that often feature, which may be introduced into these spaces. These include:

- water
- sand
- plants
- trees and climbing
- tree trunks, logs, boulders and hard landscaping
- natural surfacing
- mounds and ground modelling.

A further summary of maintenance issues can found in Appendix A.

When including nature play, providers should carry out a risk–benefit assessment. The risk–benefit assessment shows the advantages of children being allowed to use these features for play versus any potential risks in taking part. From this analysis, the skilled provider can access what the most beneficial play opportunities are for the site, allowing children to make full use of it.



Water

Water has endless fascination for children and is a hugely versatile play material. Children and young people interact with water at beaches, where there are streams, lakes, ponds and puddles. However many authorities are wary about including water in play spaces.

Standing water can be incorporated via paddling pools or big puddles, from rainwater or a tap. Puddles will not become stagnant, as they will be dispersed either by evaporation or by being played with and kicked around. Shallow ditches can offer somewhere for children to paddle after it rains, and are easy to construct and maintain. They should catch the water for a few hours before it drains away.

Constantly flowing water is wasteful and expensive so it is advisable to have a means to turn off, manually pump or activate movement in the water as part of the play activity.

Play spaces in mainland Europe often feature water, and most play equipment manufacturers produce water play equipment. This ranges from small water pumps that dispense no more than a glassful of water to those that are reminiscent of village pumps and can discharge pint after pint.

Manufactured equipment that sprays, squirts or otherwise supplies water is highly valued by children, and should be available for as much of the year as possible. A risk–benefit assessment should be applied to the use of all water features, including paddling pools, pumps and taps, ponds, rivers and streams.

Priory Park play area, Reigate, Surrey

The water feature in Priory Park play area is causing some management problems that still need to be designed out. The children pile sand on to the water play area to make mud pies and sand castles, and this then gets washed down in to the sump tank beneath the water outlet point. The sump is becoming clogged with sand on a regular basis and this causes blockages. A redesign of the sump is needed to stop the sand reaching this far. This issue is currently being addressed by the maintenance team and client.

Robin Davis, Parks and Countryside Manager, Priory Park

Rosliston Forest, The National Forest

A play space located in Rosliston Forest has been designed to introduce adventurous and exciting play opportunities. The boundaries are deliberately unclear in order to encourage exploration, and a small stream runs through the middle of the play space.

The site is managed in a partnership between the Forestry Commission, National Forest Company and South Derbyshire District Council, and they contract an independent maintenance provider to manage the site directly on their behalf. This includes inspecting the site formally on a monthly basis. The monthly inspection consists of physically inspecting the equipment and the surrounding area, and looking for remedial work that needs to be carried out.

There is a partnership agreement between the partners and the contractors, which is supplemented by a contract and detailed work schedule.

As the site contains water, approval was sought from the Environment Agency, which undertakes periodic water inspections on request. There is a range of policies in place, including the Forestry Commission's District Health and Safety Policy, Site Partner Policy and a number of other health and safety systems. A range of organisations, including the UK Woodland Assurance Standard (UKWAS) and Green Flag Award, audit the site periodically, and an independent playground inspector inspects the play equipment annually.

Chris Mansell, Community Ranger, Rosliston Forest



Sand

Sand is one of the most popular play space materials. Sand provides:

- opportunities for creative and construction play, such as building sand castles
- opportunities for fine-tuning physical movements through building, digging or running
- a type of impact absorbing surfacing (IAS).

Sand often receives a bad press, primarily because of concerns over maintenance and issues such as dog mess. However, RoSPA's (2004) practical experience shows that problems are fewer than is commonly believed.

Careful design can help reduce the maintenance requirements and allay community concerns:

- The sand area must drain properly. Where there is good natural drainage on sandy or loamy soils or on slopes, construct a pit. Where there are clay soils or no slope, a sand box may be better.
- Children will inevitably move sand around as they play. However, if a 'table' or surface is provided within the sand area, the sand is less likely to migrate out of the area as children use the table to play on.



© Play England

The assessment of how to maintain sand should be site specific, with different play spaces requiring different levels of maintenance. These should be reviewed in the light of experience. PLAYLINK (2009) note that current practice in respect of the raking of sand varies from rarely to never, to once a week, to daily. The key messages are: do not make assumptions about the level of maintenance required; certainly do not assume that sand automatically creates problems; make judgements in the light of local circumstances and local experience. Above all, remember that maintenance exists to serve key objectives, in this case creating best possible play opportunities.

Trees and climbing

Children and young people will naturally want to climb trees, and low branches offer them great opportunities for swinging and climbing. When local authorities consider the issue of tree climbing, they may wish to carry out an authority-wide generic risk-benefit assessment, which might include a visual inspection for weak or damaged branches, otherwise it should be left to the child's judgement.

Managing Risk in Play Provision: Implementation guide provides a hypothetical example of how to do a risk-benefit assessment on whether or not children should be allowed to climb trees. The risk-benefit assessment shows the advantages of children being allowed to use these features for play, which could lead the local authority to conclude that the benefits outweigh the risks and that it should leave the trees and allow tree climbing. A local authority may wish to use the risk-benefit assessment to help them come to a decision about monitoring tree climbing, and this could be reviewed once a year or more frequently if there were a change in situation.

Plants and vegetation

Plants create a constantly changing living environment, offering an alternative to the manufactured environments of urban settings. They attract living creatures, such as birds, butterflies and insects, and enable children to interact with, observe and learn about nature. They can provide a constant supply of objects and mark the changes in seasons. However, plants can be amongst the hardest features to include in a play space, and existing vegetation and new planting needs to be appropriately located within the layout. It is also important to remember that children should be able to play with the planting and use planting and vegetation as part of their play experience.

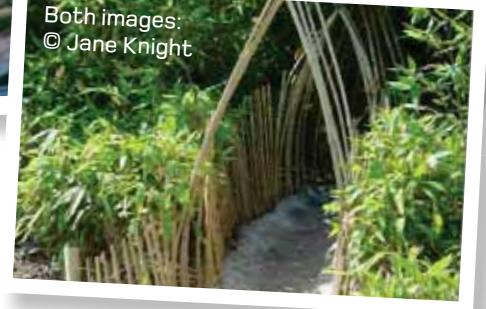
New planting areas will be particularly susceptible to damage and vandalism. Plants should not be located where they are likely to get in the way of play or be trampled. They may also need temporary protection whilst they become established, and it is important that the protection is also maintained. The reasons for including planting also need to be clearly stated and recorded in the management and maintenance plan. Teams should consider how plants will be used as part of the play experience and how they will be replaced.

There are many different plants and types of plant suitable for inclusion in a play space and this document cannot provide details of the maintenance requirements of every one. The maintenance summary (Appendix A) has, however, identified several broad categories of plants and the management and maintenance considerations are outlined in each case.

In addition, all planting areas will benefit from routine maintenance and the following general actions should be noted:



Both images:
© Jane Knight



Mulches – recommended around all planted areas to suppress weeds (plants do not thrive where there is competition from weeds) and retain moisture in the soil. Mulches are biodegradable and need to be topped up each year to ensure their effectiveness.

Watering – all plants need water. However, once established, most plants will be able to find adequate soil moisture to survive. Most trees will take two years to establish, whereas shrubs and perennials will be established after the first year. During the establishment period, watering will be required in dry conditions so a water supply will be required. In many cases, a contractor will be responsible for the survival of the plants during the establishment period. However, the cost of maintenance, specifically for damage to plants through use, must be allowed for in the initial contract.

Some areas of the country can be subject to drought and, in this case, plants that are not drought tolerant will need additional water. Having access to a nearby water supply is an advantage.

Fertiliser – new and ornamental planting areas will benefit from an annual application of a slow release fertiliser. This is probably not necessary for planting in play space and should be completely avoided for wild flower areas.

Vandalism – many trees and shrubs will regrow if they are accidentally or deliberately broken, though this will depend on the extent of the damage. Where vegetation has been broken from trees, the damaged joint should be checked and cleaned off to prevent the tree from becoming infected and to ensure it heals.

Grass

Grass is probably the most flexible and versatile material that can be used within a play space, and offers considerable play value. Maintenance decisions need to be taken about how frequently grass needs to be mowed. Understanding the maintenance issues and resources available at the design stage (such as size of mowers, and slope gradients on which they can be used) will avoid small, awkward areas of grass that need expensive hand-mowing. Edge details can also make mowing easier. Selecting appropriate grass seed mixes or turf will also reduce maintenance.

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It is important to remember that wild grass areas will lose all their flowers and have to be re-established from scratch if they are cut at the wrong times. Therefore it is important to clarify this type of concern with teams at the design stage, and then revise the maintenance regime if necessary during the first year of a maintenance contract.
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To offer increased play value, some areas of grass can be left longer between mowing to give a more natural appearance. To avoid complaints, it may be necessary to explain why these areas are being left long.

Alternatively, a mowing strip can be created around the edge of the grassy area to give a visual indication that the area is being maintained. Longer grass will also conceal dog mess so it is important that appropriate management is in place, for example signs about cleaning up after animals and dog mess bins, to ensure that the long grass can be used for play as intended. Different types of grass maintenance are examined in the maintenance summary (Appendix A).

Tree trunks, logs, boulders and hard landscaping

Fallen or cut down tree trunks, boulders and other hard landscaping offer children and young people great play value, including the chance to explore the inside of once-living trees, feel the different textures of the natural materials, practise climbing and balancing; they even provide a place to sit quietly and hang out. A suitable and sufficient risk-benefit assessment will assist in making judgements about what constitutes an acceptable level of risk in the particular circumstances with regards to the site or natural feature.

Providers should review the condition of tree trunks, boulders and hard landscaping regularly, and modify maintenance to take account of the ageing process. This could be done as part of a weekly inspection, with the removal of loose objects or moss and algae when necessary.

Not all boulders are the same, and a great deal of care is needed in choosing them for play value as some are susceptible to frost, others are very hard and brittle, breaking off with sharp edges, and others are so soft that they weather very rapidly. Look for boulders that have a slightly grippy quality to them and are resistant to frost damage.

Impact absorbing surfacing

Different surfacing materials have different merits, offer different types of play value and have different capital and maintenance costs. Impact absorbing surfaces (IAS), particularly synthetic rubber bound with resin, can consume large parts of capital budgets for conventional play provision. Therefore, surfaces with lower capital costs may free up the budget for surfacing that offers greater play value, but these may require ongoing maintenance costs.

Loose-fill surfacing

Loose-fill surfacing, for example, sand or bark chip, can offer children greater play value than more solid surfaces and can be much simpler and cheaper to maintain than most people believe.



There is little or no definitive evidence to suggest that loose-fill surfacing attract debris, syringes or dog mess. The experience of those authorities that use loose-fill materials on a widespread basis suggests that these are relatively rare occurrences. Whewey (2007) states: 'In 17 years of inspecting, I have yet to see a syringe on a playground (nearby yes, but not on); it is rare.'



Invermead Close Playable Space – Hammersmith and Fulham

Invermead Close Playable Space is a shared communal space on a grassy verge adjacent to a housing block. The space includes a fallen tree, shrub planting and a small 'play mound', as well as some boulders, a new pathway, and two separate timber seating areas that double as stepping stones or climbing structures.

A risk–benefit assessment was carried out by the provider during the design process and a copy of the assessment was sent to all the local residents. The site is inspected on a daily basis by the caretaker and maintained by a contracted ground maintenance team. The fallen tree is checked for branches or other changes, and any that might create unexpected hazards are cut off. The seating, which doubles as a climbing structure, is pegged down to ensure that it does not move and is also checked for unexpected hazards.

Boulders with a smooth surface and of varied colours have been used. These are checked for sharp edges and other possible hazards, which are also removed.

Phil Doyle, Playspace designer, PLAYLINK

The maintenance of loose-fill surfaces needs to be tailored to the site. In areas used regularly, risks of unwanted debris finding its way into sand or bark chip might be higher than in a quieter area, in which case more regular inspections should be made. There is a prevailing view that sand 'must' be raked every day – this is not necessary everywhere and would be a prohibitively expensive operation to undertake frequently.

Loose-fill surfaces can be prone to displacement. On windier sites, sand will be blown away and will need topping-up far more frequently than on those more sheltered from wind. High levels of usage on a site will also entail more regular topping-

up. Grit (actually a very coarse sand) offers many similar properties to sand, but being a heavier material is less likely to be displaced.

Landform: existing modelling, mounds and hills

Making the most of existing landform can add huge play value. If no landform or changes in level exist, these can be created by forming mounds and hills or depressions and dips.

Ease of maintenance will depend on the size and steepness of the mound. Mowing grass mounds may be tricky with standard mowers, so smaller scale mowing equipment may be necessary. On very steep slopes, manual strimming may be necessary.

Stirling Council – Chapelfield Play Area in Cowie

Stirling Council provides a number of play spaces across the district. For example, Chapelfield play area in Cowie includes shelters, seating areas and a raised beach, along with mounds, tunnels, slides and a climbing wall.

Dramatic changes in levels have radically changed the previously flat site, and the routes through the site invite the use of bikes and wheeled toys, and increase accessibility for those with mobility impairments. The natural elements include a digging patch, which can hold rainwater for a short time.

According to the park manager, there have not been any maintenance concerns with the ditch, apart from the usual litter picking. The grass is mowed approximately every two weeks from April to October. The long grass is strimmed in July and September or October. Worn areas are generally left as they are as a result of usage. If there are any safety issues, then reseeding is possible.

Rocks and boulders are inspected monthly. The most critical issue is locating them in the right places and inspecting for slippery or sharp hazards, such as broken stone or algal growth.

Colin Mackay, Playgrounds Team Leader, Stirling Council





Mud and digging patches

Children benefit from the opportunity to play with mud and dig in soil, which provides experiences that are different from sand play. The boundaries of the digging patch can be defined with shrubs, smooth boulders, logs, planks or bricks. Digging patches should use loose soil, to which sandy loam can be added to make digging easier. Digging patches should be turned over regularly to prevent the soil from compacting.

Digging patches work best when:

- there is a convenient water supply
- they are at a depth of between 500mm and 600mm
- the soil can be manipulated by small children (add old sand and lawn clippings and dig over periodically to keep this workable).

Priory Park play area – Reigate, Surrey

Priory Park play area is rectangular in shape but is divided up into smaller discrete areas by the use of earth mounding and planting. The play area also includes water play items comprised of pumps and jets that push water down an artificial rock stream-bed, but without creating any standing water.

Maintenance staff are based full-time in the park, and carry out all day-to-day maintenance. The grass is box mowed to maintain a neat appearance – approximately every 10 days during the cutting season. The sand is raked over daily to check for debris and to fill holes dug by the children.

Trees in the play area are newly planted so they are too small to climb. The park manager neither encourages or discourages tree climbing, and a tree officer inspects and maintains all the trees as necessary.

Worn patches are occurring where the playground users move between neighbouring pieces of equipment. Maintenance staff have found that the best way to deal with these is to extend the safety surface area to cover these desire lines – the surface consists of rubber tiles that are laid over the grass, with grass seed sown through the gaps.

The climbing wall in Priory Park does not produce any specific maintenance concerns. It is a durable concrete construction that is visually inspected as part of the site inspection. The only possible problem is that the handgrips sometimes come off. However, this is only occasional and they can be replaced.

Robin Davis, Parks and Countryside Manager, Priory Park



Section 4

Case study: Jubilee Way Playscape Tolworth, Kingston upon Thames, Surrey

Jubilee Way Playscape illustrates how quality design, management and maintenance can support nature play. Tunnels, logs, trees and grassy mounds combined with popular play equipment such as swings and slides create a playful landscape offering 'reasonable risk' and exciting challenges for the user.

To ensure long-term sustainability, it is always important to engage the team responsible for the management and maintenance of the space in the early design stages. The maintenance company attended design development and construction progress meetings. This has fostered an understanding of the designer's vision, whilst embedding a genuine sense of ownership of the space and awareness of the everyday challenges the maintenance team are likely to face.

Litter picking and bin emptying take place daily and the sand is raked over once a week. The sand is topped up once a year, however the children are left to spread it around the site themselves. Signage and fencing are kept to a minimum and, where possible, signs have been sandblasted into boulders to reduce their vulnerability to vandalism or need for maintenance.

The scheme consists of grassy mounds, tree and shrub planting. As with any landscape scheme, the landscape architects carefully chose the plant species based on soil type, micro-climate, maintenance implications and play value. Tree species were chosen by the young people as part of the design engagement process and the shrubs include Cornus, Salix and Physocarpus (Dogwood, Willow and Ninebark).



These shrubs are not only hardy but require minimal maintenance to flourish; cutting back to ground level once a year in February will be sufficient. Other planting includes lavender and rosemary along footpath edges, adding colour and aroma during the spring and summer. This only requires cutting back to ground level once a year in February.

A truly playful landscape offers different experiences, which can be created using features such as grassy mounds, secret hiding places and a variety of routes through the space. At Jubilee Way Playscape this has been achieved with a simple mowing regime. All the grass on the mounds has been left to grow long. A 1.5-metre wide mowing strip is cut around the base every two weeks during the summer to highlight the fact that the space is being maintained. Secret paths are then cut, up, over and through the mounds to add additional secret footpath routes.

Jubilee Way Playscape also features a bespoke concrete skate bowl and the young people have recently christened this 'Bowlworth', branding the bowl with a graffiti stencil. There are mixed feelings about graffiti in public spaces, however, in Jubilee Way Playscape, the designers, client and maintenance team believe that, unless it is considered offensive, graffiti should be accepted as part of modern culture and not used as a reason to close challenging, accessible play spaces for children and young people.

Jubilee Way Playscape was designed by landscape architects Adam White and Andrée Davies from Groundwork London. Jubilee Way Playscape has been funded by the Big Lottery Fund and Toyota, and has been delivered in partnership with the Royal Borough of Kingston upon Thames, NPS Services, Quadron Maintenance Services and Visible Changes Ltd. The total cost of the project was £240,000 and includes a three-year maintenance programme.

Local young person:

'There is nothing quite like this anywhere, it's great! The skate bowl is really good, but until the timber fence went up, the sand from around the slide and zip wire was a pain in the bowl. It's not so much a problem now. Just avoid having sand near skate bowls.'

Kingston upon Thames police feedback:

'Since Jubilee Way Playscape was opened, we are pleased to say that there haven't been any reported incidents of vandalism or crime. Quite the reverse; feedback has been of a positive nature from both young people and parents.'

Andrew Kauffman, Quadron

Maintenance:

'It was important to be included in the early decision-making process with the Jubilee Way Playscape project and have the opportunity to comment on layout, materials and planting. The main challenge since the opening has been the overwhelming number of people using the space. Our team on the ground all agree the project is great success and a needed addition to the borough.'

Sarah Gaventa, Director, CABA Space:

'UK play space design and management should learn from the Jubilee Way Playscape design approach and be more naturalistic and imaginative.'

**David Yearly,
Play Safety Manager, RoSPA:**

'Playscape offers great opportunities – the exposure to reasonable risk enables children to develop the skills they need throughout life.'



Trees

- Water trees well for the first growing season.
- Remove damaged or dead branches.
- Leaves can be left to provide play value in areas where they don't cause an issue.

Grass

- Water grass well for the first growing season
- Meadow grass: cut in September.
- Grassy mounds: 1.5m mowing strip around base.
- Create temporary paths by cutting 1.5m wide path over, through and around grassy mounds.
- Protect turf until established. Ideally, lay turf early on in the construction process.



Sand

- Visual inspection in compliance with BSEN 11 77 for safer surface: daily.
- Regular raking: twice weekly.
- Re-grade under swing: weekly.
- Top up sand to original depth: annually.



Shrubs

- Plant higher than average density to reduce need to fill gaps.
- Water shrubs well for first growing season.
- Cornus: prune to ground level in March every 2-3 years to encourage coloured stems.
- Willow: prune annually between February and March and utilise prunings.
- Lavender: lightly clip to retain bushiness.
- Rosemary: lightly clip to retain bushiness.



Skatebowl, tunnel and concrete surfaces.

- Daily visual inspection of skatebowl area in compliance with PAS 30 for wheeled sports.
- Sweep daily to remove any leaves, sand or litter.
- Empty drainage silt trap as and when required.
- Most councils have a dedicated graffiti removal team, it is advisable to involve them early on in the construction process.
- Sweep concrete footpath: twice weekly.



Jubilee Way Playscape

| | |
|----------------------|--|
| DESIGNERS: | Adam White Andree Davies Groundwork London |
| CONTRACTOR: | Visible Changes/Wheelscape Ltd |
| CLIENT: | Royal Borough of Kingston NPS Property Services |
| MAINTENANCE: | Quadron Services Ltd |
| FUNDERS: | Big Lottery Fund Toyota |
| CONTRACT: | £220K (includes 12 month maintenance contract) |
| COMPLETED: | July 2008 |
| ONGOING MAINTENANCE: | £4K per year |



Equipment

- Daily visual inspection of playground equipment to be carried out in compliance with BSEN 11 76.



Signage

- Signage sandblasted into boulders prevents vandalism.

Bridge, shelter and other timber structures

- Choice of sustainable recycled hard wood reduces the need for ongoing treatment.
- Use disk sander to remove graffiti on large timber surfaces.
- Use hardwood timber for log seating with a minimum diameter for 400mm, for a longer life span.



Section 5

Further information

Where to go for help

The Royal Society for the Prevention of Accidents (RoSPA)

RoSPA provides information on playground management and the safety of indoor and outdoor play areas. Their information sheets cover aspects of playground safety and can be viewed online or downloaded, and they also have a list of publications to help in understanding and maintaining play safety.

www.rospace.com.uk

Play England

Play England is a government's national delivery partner, working with DCSF and others to implement England's first national Play Strategy.

www.playengland.org.uk

CABE Space

CABE Space promotes well-designed parks, streets and squares as a crucial part of our towns and cities.

www.cabe.org.uk

Groundwork UK

Groundwork supports communities, working with partners to help improve the quality of people's lives, their prospects and potential and the places where they live, work and play.

www.groundwork.org.uk

Natural England

Natural England is here to conserve and enhance the natural environment, for its intrinsic value, the well-being and enjoyment of people and the economic prosperity that it brings.

www.naturalengland.org.uk

Rosliston Forest, The National Forest

Rosliston play space is set in the oldest

of the Forestry Commission's community woodlands within The National Forest.

www.forestry.gov.uk

Priory Park play area, Reigate

For information about this play area, visit the Reigate and Banstead Borough Council website.

www.reigate-banstead.gov.uk/public/Leisure/Parks_countryside/Parks/

Jubilee Way Playscape, Tolworth, Kingston upon Thames

Jubilee Way Playscape was designed by landscape architects Adam White CMLI and Andrée Davies ALI from Groundwork London

www.groundwork-playscape.org.uk

The play space was constructed by Visible Changes Ltd.

www.visiblechanges.co.uk

It is managed for Kingston Council by Quadron Services.

www.quadronservices.co.uk

Nature Play – Simple and fun ideas for all

This practical guide on nature play offers fun, simple and cost-effective examples of play ideas from easily sourced materials. It is an useful publication for public space managers wanting to engage with natural play.

www.forestry.gov.uk/forestry/INFD-7LSEHW

KIDS

The disabled children's charity KIDS, promotes inclusive play and leisure nationally across the children and young people's sectors. Play England has commissioned KIDS to provide advice and guidance on inclusive play as part of Play England's DCSF support and challenge contract.

www.kids.org.uk

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Appendix A

Maintenance summary

This summary provides basic maintenance guidance for natural features within play spaces. It also makes particular reference to the list of specific 'Plants which might be suitable for use in play spaces' included in *Design for Play* (2008) – marked *.

Water

| Water play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|--|---|--|---|----------------------|
| Drinking fountains | Children use containers to fill with water. | Allow for cost of water supply. Drainage connection. | Manufacturer's guidance should be followed. Maintain drain outlets to prevent blocking and water build-up. | Medium |
| Creating channels or using water trays | Encourages social play and understanding of water movement. | Allow for cost of water supply. Drainage connection. | Very little. Channels are often used in conjunction with water pumps. | Low |
| Electronic jets | Surprise and anticipation value. | Can be expensive. Need to allow for cost of water supply. However use can be controlled. Drainage connection. | Manufacturer's guidance should be followed. Maintain drain outlets to prevent blocking and water build-up. | High |
| Water pumps | Develops motor skills. | Choice of correct pump is essential. Allow for cost of water supply. Ensure water falls over boulders or into channels and adequate drainage and drain connection is included. | Manufacturer's guidance should be followed. Choosing the most suitable water pump can drastically reduce the maintenance implications. Maintain drain outlets to prevent blocking and water build-up. | Medium |
| Puddles | Understanding climate and water cycles. | Very little, children have played in puddles since time began. Client has to accept there will be some standing water. | | Low |
| Ponds | Nature and habitats. | Creating a pond is a specialist area of work, which should be based on the specific landscape design, raising a number of maintenance considerations. | An ecologist or landscape architect should be appointed to prepare a separate maintenance schedule. Once established, maintenance can be low, however establishment requirements would be high. | Low |

Plants and vegetation

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|---|--|--|--|----------------------|
| Mature trees: active play | Climbing – but low branches needed. As a support for tree houses and swings. Imaginative play. Supports biodiversity. | Ensure that the tree is sound and that active play use does not damage its structure. If tree is to be climbed, remove possible neck traps 1.2 metres above the ground, as well as eye hazards and potential for falling into lower branches. Play policy should include a statement that play in trees is acceptable. Maintain an impact absorbent surface under the trees such as play bark. | Regular inspection to check for weak branches and new hazards. Maintenance requirement will be based on arboriculturalist's advice and carried out by expert. Regular inspection to check adequate depth of play surface below tree. | Low |
| Mature trees: passive use | Shade Loose parts – fallen leaves, seeds, fruit. Sensory experience. Visual amenity. Seasonal change. | Ensure that tree is sound so no limbs fall. | Annual inspection. Maintenance requirement will be based on arboriculturalist's advice and carried out by expert. | Low |
| New trees | Loose parts – leaves. Visual amenity. Seasonal change. | Maintain to ensure successful establishment – normally part of one or two year establishment period, which may be part of planting contract. | Weekly watering in dry periods during first year following planting. Check and repair tree guard and support during establishment. Loosen tree ties when necessary. Keep base of tree free of weeds. | Medium |
| <i>Betula utilis</i> <i>jacquemontii</i> Birch* | Birch are small trees and are not suitable for climbing. White bark is attractive and peels so can be used as 'loose part' for example a natural 'paper'. | Should be trouble-free and need minimal maintenance once established. Trunk can be scrubbed or jet washed to reveal whiteness of bark. | Annual inspection to ensure it is structurally sound and disease free. | Low |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|--|--|---|--|----------------------|
| <i>Pinus radiata</i> Monterey pine* | Evergreen tree which drops soft needles – a weed suppressing mulch and natural needles for making leaf crowns. When mature, produces pine cones for play fights and loose parts. Not good for climbing. | Can be used as windbreaks or attractive specimen trees, which are good for decorating in the winter. Should be trouble free and need minimal maintenance once established. | Annual inspection by arboriculturalist/tree officer to ensure it is structurally sound and disease free. | Low |
| <i>Populus tremula</i> Aspen* | The leaves tremble and rattle in the wind, allowing you to hear the wind. They also have catkins and yellow autumn colour. | Aspen is a large, fast growing tree with a vigorous root system. It thrives in damp (not wet) conditions and because the roots seek out damp areas, it can damage drains and leaking water pipes. On clay, it is recommended that this tree is not grown within 40m of a building. | Annual inspection by arboriculturalist/tree officer to ensure it is structurally sound and disease free. As they grow quickly, aspens are weak branched and relatively short-lived. | |
| Fruit trees | There is a growing interest in orchards and edible landscape. Nice to include play within a community orchard. Fruit to eat for example, apples and pears. | Fruit trees need pruning, depending on species and variety. While not complicated, seek advice to ensure next year's fruiting buds are not cut off accidentally. Fruit trees can attract insects, which can be both an asset and a nuisance. | Annual pruning – timing and type dependent on variety. Some pest and disease control may be required as needed – treatment depends on regime (organic or conventional). Note: Control of Pesticides Regulations 1986. | Medium |
| Over-mature shrubs | Mature shrubs have been removed from many parks due to concerns about undesirable people and activities within them. In the right location, they can be a great place to play. | Pruning can lift the canopy, reveal the branch system and create a more open structure. Great for play and also activities are more visible. There are many different varieties and forms of shrubs, therefore seek guidance from a landscape architect or horticulturalist on the most appropriate approach in each case. | Regularly clear litter and check for signs of misuse. If heavily used, check that understorey does not get too worn or eroded as this can damage the tree; protruding objects are a hazard. | Medium |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|---|--|--|---|----------------------------------|
| Shrubs (general) | Some robust shrubs can be designed to be part of the play experience. Shrubs can add character to the play space. Use shrubs to screen undesirable views or as a natural barrier for example, between a road and play space. Source of loose parts. Sensory value. | There are many different varieties and forms of shrubs, therefore seek guidance from a landscape architect or horticulturalist on the most appropriate approach in each case. It is important to understand the role of shrubs in the play space design, and this should be clearly stated in the management and maintenance plan. Ensure the successful establishment of new planting. In the early stages, planting areas will need to be protected. | Specific maintenance regime should be developed with the advice of a landscape architect or horticulturalist. Regularly clear litter and check for signs of misuse. Once established, plants may need pruning and trimming to ensure they don't get too big for their space. Time of pruning depends on plant species but in general: Flowering shrubs – prune after flowering. Deciduous shrubs – prune winter or early spring. Evergreen shrubs – prune early spring. | Medium to low, once established. |
| <i>Buddleja davidii</i> Butterfly bush | Attractive flowers attract butterflies. | Fast growing, summer flowering shrub (flowers on current year's growth). Flowers best when pruned hard back, which also stops it getting untidy. | Prune annually, in autumn after flowering. Cut back all stems to strong buds or developing shoots close to the base of the plant. | Medium |
| <i>Salix caprea</i> Pussy willow | The best feature of this variety of willow is the soft, velvety male catkins that are a harbinger of spring. This is why the role of the plant should be clearly stated. | There are many different types of willow, all vigorous and versatile. To make the most of this willow, do not cut back in spring as other 'coppice' willows, as there will be no pussy willow. | To obtain pussy willow, do not hard prune or coppice this variety. Carry out any pruning to reduce size and density or keep the shape in winter (when dormant). Cutting hard back can rejuvenate old plants, although there will be no pussy willow the next spring. | Low |
| <i>Salix matsudana tortuosa</i> Corkscrew willow | An intriguing willow with twisted stems. | This fast-growing ornamental willow is grown for its stems and will grow into a large, multi-stemmed shrub. | Treat this willow like a shrub and carry out any pruning to reduce size and density or keep the shape in winter (when dormant). Cutting hard back can rejuvenate old plants and new twisty stems will grow. | Low |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|---|--|--|---|---|
| Willow play features <i>Salix alba</i> * | Willow is an inexpensive and versatile plant that can be used to create interesting, green play spaces. New shoots that are not woven back into the structure can be used to make new structures and also have great play value. They can be used as loose parts or to make baskets and decorations | Willow 'rods', 'withies' or 'wands' will quickly root into the soil and grow away, though they will need adequate water. As fast-growing plants, they can grow up to a metre each season. Willow is a vigorous and fast-growing plant, which responds well to heavy pruning and cutting back to the ground. If left unmanaged and unmaintained, willow will develop into a fast-growing tree. | During establishment (the first season), the soil should not be allowed to dry out; watering may be required once a week in dry weather conditions, depending on soil type. Also, the area around the base of the willow should be kept free of weeds; ideally mulched. In autumn/winter (after leaves have dropped), the new growth can be pruned back to within 1cm of the original 'structure' or woven back into the structure to replace areas that have failed or to reinforce areas or thicken up the structure. The most vigorous growth is likely to be closest to the ground so this is best used to reinforce the structure. To keep the original shape and form of the structure, follow these lines when weaving in new growth. Monthly inspections will be required throughout the growing season to ensure that new growth isn't creating obstructions or trip hazards, or protruding at eye level. | Medium |
| Hedges as boundaries | Hedges create a soft edge to a play area and can create shelter areas and dens. | Hedges will take time to establish. Design height is important to allow visibility into the play area. Refer to design intentions. | Need to be regularly trimmed in establishment stages to ensure they are bushy with no gaps. Once established, regular cutting and pruning is required to maintain density of hedge but frequency depends on species. Specific maintenance should be developed in each case with the advice of a landscape architect or horticulturalist. | |
| Hedges as play features | Could be used to direct movement. Could create hedge mazes. | It is important to understand the role of the plants in the design of play space and this should be clearly stated in the management and maintenance plan. This should state the designed height for the hedge. | Formal hedges require regular pruning or trimming. Frequency depends on the species and how fast it grows. Time of trimming depends on the species. Specific maintenance should be developed in each case with the advice of a landscape architect or horticulturalist. | Medium to high, depending on species – annual or more regular trimming may be required. |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|--|--|--|---|----------------------|
| Topiary | Plants trimmed into shapes can be great fun and add to a play space. Selecting the right plant varieties is important – seek expert advice. | Takes time, patience and dedication for them to look great. | Lots of trimming and pruning required to get this right. | High |
| Bamboo | Once established, bamboo is a tough plant and a great asset to a play space. Imaginative play and exploration. Smooth stems are great to touch. Use hollow stems to make wind chimes. Cut stems are strong (used as scaffolding in China) and are great for building dens. | There are two main types of bamboo: clumping and spreading. Spreading bamboo can be hard to control and can even push up through paving. It should be used only where there is plenty of space. Clumping bamboo is more suitable in most play settings. Branches and shoots are rigid and could be hazardous at eye level. | Monthly inspection in the growing season to ensure that bamboo is not getting out of control and ensure that there are no dangerous branches or shoots. As with all planted areas, if children are running around in the bamboo, ensure that any soft ground surface is not becoming eroded or worn. Cutting back should be done with care as hidden cut shoots could be sharp and hazardous. | Medium |
| <i>Pleioblastus auricomus</i> A type of bamboo* | Hollow, purple-green canes and leaves with yellow and green stripes. Attractive bamboo that's good to play in. The cut bamboo canes are thin and flexible. | An upright, evergreen, woody bamboo that will grow in woodland and grows to 1.5m tall. It has short-running rhizomes, so will spread to form a clump up to 1.5m wide. A good bamboo to play in once established, which will also stop it spreading too far. Make sure this has enough space as, even though it is not particularly vigorous, it is hard to control the spreading rhizomes unless restrained. | Tidy up fallen stems, and check for sharp, or hidden cut stems. | Low |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|--|---|---|---|----------------------|
| <i>Phyllostachys flexuosa</i> * Zigzag bamboo | The bottom stems of this whacky bamboo can be zigzagged! Smooth stems are green then yellow, and fantastic to touch. | A clump-forming bamboo which can grow very tall (often to 3m but may reach 10m in the right conditions!). It will also grow in woodlands. | May need cutting back/down if it gets too big for its setting. Watch out for hard or hidden cut stems. | Low |
| Ornamental grasses | These are very popular and can add value in a play space. Sensory – particularly tactile therefore good next to paths. Source of loose parts – seed heads – make great paint brushes. | Once established, ornamental grasses need annual maintenance. | Deciduous grasses need cutting down to just above ground level when the seed heads flop – usually January/February. | Low |
| <i>Arundo donax versicolor</i> * | This tall, bamboo-like, evergreen, variegated grass would make an attractive screen or hiding place. When cut, the stems make good den roofs. | Arundo donax can be grown throughout the country. It needs to be protected from strong winds. | The variegated grass grows up to 1.8m high; the non-variegated variety can grow to 5m. The stems will flop and break so need periodic tidying, especially if children are allowed to play between clumps. Other than this, evergreen grasses need little maintenance but for the best foliage, cut back to ground level, annually in late winter. To encourage flowers, cut back every two years. Watch out for sharp or hidden cut stems. | Medium |
| <i>Briza maxima</i> Greater quaking grass* | Heart-shaped seed heads, appearing in late spring to late summer; tremble even in a light breeze. The dried seed heads can be picked and used in art work. | A low, fine annual grass grown for its seed and dried seed heads. As it will self-seed, it would work well in a naturalistic area. Dies back in winter and is best cleared to allow new seedlings to grow. | As an annual, this grass needs to be resown every year, however it will self-seed. It spreads easily and can become a nuisance. | Low |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|---|---|---|---|----------------------|
| <i>Stipa gigantea</i> Golden oats* | The seed heads of this tall evergreen grass look beautiful as they catch the light and swish in the breeze. Seed heads can be used in art work and can be dyed. | An evergreen, clump-forming perennial grass with stunning, tall, oat-like seed heads from summer-autumn. | This trouble-free grass needs little maintenance other than tidying up the fallen seed heads in January/February – a job that can be done by the children who might want to collect the seed heads. | Low |
| Herbaceous plants and annuals | Generally not big or tough enough to play within, but they add greatly to seasonal change, sensory value and biodiversity of a play space. | Usually associated with more intensive garden areas, so plant selection is important – it's not advisable to select plants that need a lot of attention or staking. Protect planting and use design to define as 'not to be played in'. Annuals often have stunning flowers and good seed heads but will die back each year. Many will self-seed, which can give a naturalistic feel to the play space. | Type of maintenance will depend on species so refer to management and maintenance plan. Perennials don't generally need a great deal of attention but may need dividing every 3-5 years. Annuals need resewing each year unless they self-seed. | Medium |
| <i>Bergenia cordifolia</i> * Elephant's Ears | Tough, leathery leaves which look like elephant ears. | Low growing evergreen perennial which dislikes extremes of heat and drought. | Trouble-free plant, although fleshy leaves may be nibbled by slugs and snails. Mulch in autumn. | Low |
| <i>Fragaria vesca</i> Wild strawberry* | Small version of cultivated strawberries Great for children to see how strawberries grow. Colourful red fruit in summer is good to eat | Low growing perennial that spreads by stolons (new plants on the end of long stalks). Grows in all soils but thrives in alkaline conditions. Good in containers. May be more appropriate for a school or staffed play area. | Remove stolons so plant puts energy into fruit production. Spread layer of straw under plant to protect fruit. Susceptible to powdery mildew in damp conditions and slugs eating fruit before children get to it. | High |
| <i>Hypericum calycinum</i> * Rose of Sharon | Ground cover plant for shady areas with large yellow flowers. | Vigorous and spreads by runners so can be invasive; will withstand vigorous use. | To control, cut or strim to ground level in spring. | Low |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|---|--|---|--|----------------------|
| <i>Lavandula angustifolia</i> * English lavender | Blue flower spikes in summer attract bees because of high nectar content. Flowers and leaves smell fantastic. Seed heads can be collected and used to make lavender bags. | A small, bushy shrub that would be great in sensory area. Needs to be close to a path where it can be touched. It flowers on current year's growth. | Prune every year after flowering or in early/mid-spring. Cut back flowering spikes to within 1.5-2.5cm of previous year's growth | Medium |
| <i>Lunaria annua</i> Honesty* | Mainly grown for its translucent seed pods, which can be used in crafts. | Annual or sometimes biennial so will require reseeded or allowing plants to self-seed. Most suitable for a wild area or woodland where it can naturalise. | If allowed to naturalise, no maintenance required except to inspect on annual basis to ensure that it hasn't become too dominant. | Low |
| <i>Mentha spicata</i> Spearmint* | Leaves smell amazing when squeezed. Can be picked, nibbled and taken home to make tea or use in cooking. | Spreading perennial which can be invasive. Consider planting in a container (which could be buried in the ground) or in a raised bed to keep it under control. Best used in an informal, sensory or herb area where it can be touched. | Main issue is to stop it spreading where it's not wanted. Dig out unwanted rhizomes which can easily be potted up and sold or stuck in the ground in another location. | Medium |
| <i>Stachys byzantina</i> Lamb's ears* | Lovely and soft to touch. | Low, mat-forming perennial that makes good ground cover and should be placed where it can be touched. | Trouble free and no particular maintenance requirements. | Low |
| Mown grass | Maintained grass is an extremely versatile and soft surface and an asset in any play space. Tactile – especially with bare feet. Good for ball games and running around. | Grass grows well in Britain and is a characteristic of the natural landscape. It is widely appreciated despite the high level of maintenance – which needs equipment but no great skill. There are many types of grass and some can tolerate greater wear and tear. Seek expert advice on grass seed/turf selection. | Regular mowing (once a week from spring to autumn). Replacement of worn areas. Annual renovation to relieve compaction where well-used. In extended dry weather conditions, grass will 'brown off' and, may need watering/irrigation. | High |

| Natural play feature | Examples of play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|--|---|---|--|----------------------|
| Grass slopes – Steep slopes (1:3 or steeper) | Mounds and slopes can be challenging and exhausting to run up and down. | Will be prone to erosion during play and may need to be reinforced so they support greater wear or be planted to prevent access. | A small scale hand mower may be required and a strimmer would probably be necessary on the steepest slopes. Will need feeding annually. | High |
| Grass mounds and slopes – gradient 1:3–1:4 | Mounds and slopes are great for running up and down and rolling down. | Standard lawn mowers can generally cope with slopes but this terrain may be too steep for a standard gang mower. Check equipment available to the local maintenance team. | Ideally with a standard gang mower but may need specialist equipment depending on available machinery. | High |
| Long grass | Long grass has a more natural effect and contrasts with regularly mown grass. Walking through long grass can be hard work and if wet, can soak you. It can also support greater biodiversity and look stunning with wildflowers mixed in. | Longer grass can conceal dog mess – although this can be addressed through signs and the provision of bins. Longer grass can appear unkempt and make an area look neglected. It is important that the design intention and planned maintenance regime is communicated to users and the community to avoid complaints. | Long grass areas only need to be mown two or three times a year. Patterns can be mowed into the grass to create a mixture of long and short grass, creating paths and mazes. | Medium |
| Wildflower meadows | Wildflowers can look beautiful and are great for biodiversity. They need the right conditions (poor soil) and seeds must be selected that are appropriate to the soil type. | In between flowering, wildflower meadows can look untidy. Managing community expectation is therefore important. Avoid in areas where ticks may be prevalent. | Spring meadows – cut at the end of June. Summer meadows – cut at the end of September. Rake up ‘hay’ to maintain low fertility or leave piles for playing in. | Medium |
| Wild areas | Wild areas probably have the greatest play value of all and, by definition, they should appear to be wild and unmaintained. The key thing is to subtly give children ‘permission to play’. | These areas should have a minimal level of maintenance and management; only enough to ensure that they remain safe. | Periodic inspection to ensure that no rubbish or dangerous materials have been dumped. | Low |

Impact Absorbent Surfacing

| Surfacing | Examples of play space value | Maintenance considerations | Maintenance requirement | Level |
|-------------------------|---|--|---|--------|
| Granular bark | Opportunities for creative and construction play, fine-tuning physical movements as children build, dig or run. | As loose-fill IASs have high-impact absorbency, resulting from the natural ability of the surface to move, it is important to have readily available additional bark to top it up to the original level. | In areas of particularly high play activity, weekly levelling with a rake is recommended. | Medium |
| Elastic or supple barks | Opportunities for creative and construction play, fine-tuning physical movements as children build, dig or run. | The texture of these barks causes them initially to matt together. Therefore, topping up is best carried out prior to forking or turning, so that the whole surface, old and new, forms a homogenous mass of equal texture and consistency. | Top up as required and replace completely every third or fourth year. | Low |
| Wood products | Opportunities for creative and construction play, fine-tuning physical movements as children build, dig or run. | There is a profusion of products available of varying species and particle sizes. The chosen product must be well graded to eliminate all dust and too-fine materials, large chunks and long thin slivers. | Areas of heavy wear will need additional material to be raked in from the surrounds to fill any depressions – usually on a monthly basis depending on use. Wood-type products are less durable than bark. Their structure will rapidly degrade, necessitating total replacement, since mixing old and new wood surfaces is not usually recommended. | Low |
| Sand | Opportunities for creative and construction play, such as building sandcastles | A suitable product should have rounded particle sizes between 0.2mm and 2.0mm. Sand will also increase wear on timber equipment, painted surfaces, moving joints and bearings. | Replacement or screening of all types of sand every 6-8 years. Possibly weekly inspections, but this varies from daily on some sites to monthly on other sites. | Low |
| Grass | Tactile – especially with bare feet. Good for ball games and running around. | The British Standard Institution now recommends that a well-maintained natural grass surface can be used under fixed play equipment with a fall height up to 1.5m in certain situations. Maintenance of grass in a play space will ultimately be the decision of the provider and the governing body – the board, council, managing director, committee or management committee. | Regular mowing (once a week or fortnight from spring to autumn). Annual renovation to relieve compaction where well-used. In extended dry weather conditions, grass will 'brown off' and, may need watering/irrigation. | Medium |

Natural landscape features

| Natural play feature | Typical play space value | Maintenance considerations | Maintenance requirement | Level of maintenance |
|-----------------------------------|---|---|---|----------------------|
| Fallen trees, logs and tree roots | <p>Clambering and climbing.</p> <p>Direct contact with natural materials.</p> <p>Sensory experience.</p> <p>Understanding of natural materials and processes.</p> | <p>Can have great play value but falls outside EN standards so carry out risk-benefit assessment.</p> <p>Ensure structure is stable and there are no entrapment hazards.</p> <p>Refer to Forestry Commission's <i>Nature Play 2008</i>, which has comprehensive advice on use of fallen timber in play.</p> | <p>As a natural process, tree will gradually rot (hard woods more slowly than soft woods). Carry out periodic inspection to ensure that tree remains safe and stable.</p> <p>Maintain any safety surface around features.</p> | Low |
| Stones and boulders | <p>Solid and permanent looking boulders introduce history and geology into a play space.</p> <p>Closely examine for fossils and different coloured components.</p> <p>Balancing.</p> <p>Hiding.</p> <p>Creating a maze or defining a space.</p> <p>Seating.</p> | <p>Carefully consider type, layout and orientation of boulders before placing large stones and boulders.</p> <p>Main consideration is entrapment and relative heights.</p> <p>Carry out risk-benefit assessment as fall outside EN standards.</p> <p>Important to get placement right as can be difficult to move.</p> <p>Think about frost action causing flaking off and sharp edges. Gabbro boulders have slight grippy quality to them and are resistant to frost damage.</p> | <p>Once in place, these should require minimal maintenance.</p> | Low |

Nature play: Maintenance guide

Lisa Davis, Adam White and Jane Knight

Nature play: Maintenance guide has been produced to support those responsible for developing, delivering and maintaining innovative, natural play spaces into parks and play spaces.

This guide highlights the need for commissioners and designers to consider the management and maintenance implications from the start and throughout the development of a new play space; identify procedures to support the ongoing maintenance of these play areas, and ensure that consideration is given to ongoing revenue funding for maintenance, repairs or replacement.



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Play England, 8 Wakley Street, London EC1V 7QE
Tel +44 (0)20 7843 6300 Email playengland@ncb.org.uk www.playengland.org.uk

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