



London Play Briefing

June 2009

Specification for a rainwater-harvesting children's play system for consideration for grant-aid by Islington Strategic Partnership - Environment and Sustainability Board

Introduction and background

The idea has been developed by London Play through discussion and consultation with Islington Play Association, and play workers and managers of adventure playgrounds as part of the Natural Play Project, for further information see www.londonplay.org.uk/document.php?document_id=1222

This project has been developed in response to a call for ideas from Oliver Burke at the Islington Council Green Living Centre, who is administering funding for projects to ameliorate climate change problems. We envisage that a pilot demonstration project could be in use for the summer for under £5,000.



A little bit of water can go a long way for play, channelled into a stream bed (Mile End Park).

The problem

This idea is to make positive use of harvested rainwater diverted from the roof of a building that would otherwise flow into the drainage system via guttering and downpipes. In the event of a flash flood, excessive rainwater enters the sewage system (most of London has no separate rainwater drainage, it is shared with sewage removal) this can cause sewage to spill over untreated into the river Thames as the treatment works cannot deal with the excess. In extreme rainfall conditions it can also cause localised flooding as water backs up in the drainage system when more enters than it has the capacity to take away.

Water play

Children love water play, Islington council Greenspace has responded by installing a number of water play arrangements in public play areas, such as Paradise Park and Highbury Fields. However, these are mains-fed, and are only switched on for three or four summer months. They work by spraying water, completely soaking children, so are not useable in winter months. Water play can and should be available all year round, with channelled surface water used for boats, dams, mixing with sand, and splashing in wellies.



Water play is good all year round, not just when it's hot.

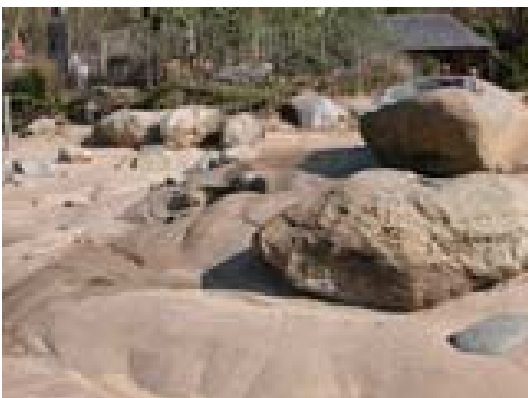
The solution

Islington Play Association will pilot this project at an adventure playground, which is ideally suited to this type of project, as children can help with the building, and the ethos is to innovate and change the availability of activities. The ideas, once piloted can equally be applied to a school, nursery school, children's centre or play area in a public park or block of flats.

Rainwater diverted and harvested from a roof down-pipe can be utilised for play purposes in a variety of ways Rainwater can be sent into a channel, at a very slight fall angle on a concrete raft set out to facilitate a flow around an area, collected into shallow splash pools before finally going into a soak-away which can also support planting for a bog-garden, or shade trees such as willow, which also give excellent play value with their low hanging branches. Water channels can be bridged and go through tunnels, and built into model landscapes.

Sand can be added to enable the water to be dammed and diverted, a good example of this is at the Lady Diana Memorial playground, Kensington Gardens.

www.royalparks.org.uk/parks/kensington_gardens/diana_playground.cfm



The Lady Diana Memorial Playground in Kensington Gardens has a water play feature with water circulating round rocks in a stream, with sand at one side as well that can be used to dam the flow of water.

Splash pools

Shallow splash pools are not considered hazardous by the HSE, their 2005 press release on paddling pools says: “We recognise the benefits to children's development of play, which necessarily involves some risk, and this shouldn't be sacrificed in the pursuit of the unachievable goal of absolute safety.”

www.hse.gov.uk/press/2005/e05005.htm

Warm weather fun

In warm weather, waterfalls and fountains can be activated both straight from harvested rain water, a gargoyle set on a wall would be a useful beginning, water can then continue into the channels, splash pools and final soak-away.

Stored rainwater

Harvested water can be stored in a tank, set high enough to give the water pressure required, which only needs to be two metres for a waterfall, or much less for a channelled stream. An alternative possibility for stored rainwater could be a 12V solar powered pump, if height for a tank is a problem. Careful matching of solar panel and pump would achieve a flow dependent on intensity of sun, with a myriad of learning outcomes. Stored rainwater can also be used for watering plants and gardening.

All water storage schemes will need to give careful thought to access to controls and taps to ensure water is conserved and used only when required. Electrically operated remote-control valves may be of use here. Rainwater tanks should be securely covered, to avoid accidents and prevent mosquitoes breeding.



A low pressure fountain can be fun; this would work while it is raining, or later off a gravity-fed storage scheme.

End thoughts

With all play projects, the devil is in the detail of design - if the soak-away floods the whole playground, we won't win, but we can test now with a piece of guttering under the rainwater drain.

The channelling of the water must be gradual, too little and the flow will be “boring” too fast and it won't be dammable, I think we can work on site with children to design and test to get it right, and this will be part of the learning.

Contact:

Alan Sutton - London Play 020 7272 9266 alan@londonplay.org.uk

Max Muller - Islington Play Association 020 7607 9637 max@islingtonplay.org.uk

Technical consultant to Islington Council on this grant-aid programme (cannot be expected to give free advice, but a useful website to look at):

Bob Bray, Robert Bray Associates Ltd

Sustainable Drainage Consultants and Landscape Architects

Fairfield, Coronation Road, Rodborough, Stroud, Gloucestershire GL5 3SB

Tel: 01453 764885

Email: bob@robertbrayassociates.co.uk

www.sustainabledrainage.co.uk

Alan Sutton Play Development Manager

London Play, 89-93 Fonthill Road, London N4 3JH