# FLOWFORM PLAYGROUNDS ™

**And**

## Case Study
## Lucknow Kindergarten
## Hawkes Bay
## New Zealand

# An Introduction to Flowform Playgrounds™ for Early Childhood Development

**Introduction**
All children need regular positive contact with nature, and water play is central to this. Flowforms are perfect educational water-play designs for children and their educational needs.

Some are streams, some cascades and others like springs, and they all bring nature to school and home!


Picture – Raphael house Wellington

Our fascinating products provide a safe experience of generous cascading or flowing streams, harmonious designs and fascinating water patterns with the rhythmical music of water all wrapped in one! The unique rhythms of our eco-sculptures make for fascinating and enjoyable experiences with water. The atmosphere of a Flowform creates a social environment second to none. They create a humidifying waterscape with healthy 'negative ions' radiating out similarly to a forest waterfall.

They act as a magnet for children who are fascinated by them. It has been noticed here and overseas that quieter children brighten up and livelier characters become calmer and more focused. Their senses become more active through the interplay of light and sound with water movement when combined with eye hand co ordination and balance as they play around the Flowforms.

This, combined with social co-operation and imaginative games, brings very real benefit to pupils engaged with our Flowform play equipment.

And for those older children in Primary Schools, there are a number of scientific plant and water projects that can be conducted using our Flowform eco-technology.

With regard to safety, the feature of Flowforms is that they can be switched off by the adults from inside the school house and all the water runs out into a hidden sump. A timer can also be easily set up for little extra cost. And what are left are attractive sculptures in the landscape.

Parents and teachers also find them relaxing with the lovely, soothing sounds spreading throughout the playground.

Our Flowforms are totally unique and provide more water play than any other water features of a similar cost. They also improve water quality and are used as eco-technology globally in various water treatment situations, while also masking intrusive traffic and industrial noise pollution.

Flowforms can be placed anywhere in the garden or the social architecture, where the sound will bring a forest stream mingled with gentle lapping waves on a beach into your environment.

The materials we use are also top class, long lasting and stylish. They can be kept clean with a few wipes of a cloth. We have pioneered very realistic jade and granite-effect textures with incredible life span.

They are straightforward to order, freight and install. Our company also provides free backup information.

**Summary of Benefits**

- Lovely water play and Dancing Light
- Unique figure of eight rhythms
- Lively sounds of running water
- Great where ever people gather!
- Splashing water softens the air.
- Radiates healthy natural energy.
- Sets perfect social atmosphere.
- Relaxing yet enlivening
- Masks traffic, industrial noises.
- International eco-sculptures.
- Suits all landscaping situations
- Revitalises ponds and streams
- Fish, birds love Flowform water.
- Beautiful models for all styles.
- Gorgeous natural stone effects.
- Long lasting, lightweight, strong.
- More water flow, with a smaller pump, than other water features!
- Child safety in a flick of a switch!
- Easy installation & maintenance.

Our Website has additional supportive information, images and videos. Please contact us directly if you require additional information.

# Case Study – Lucknow Kindergarten

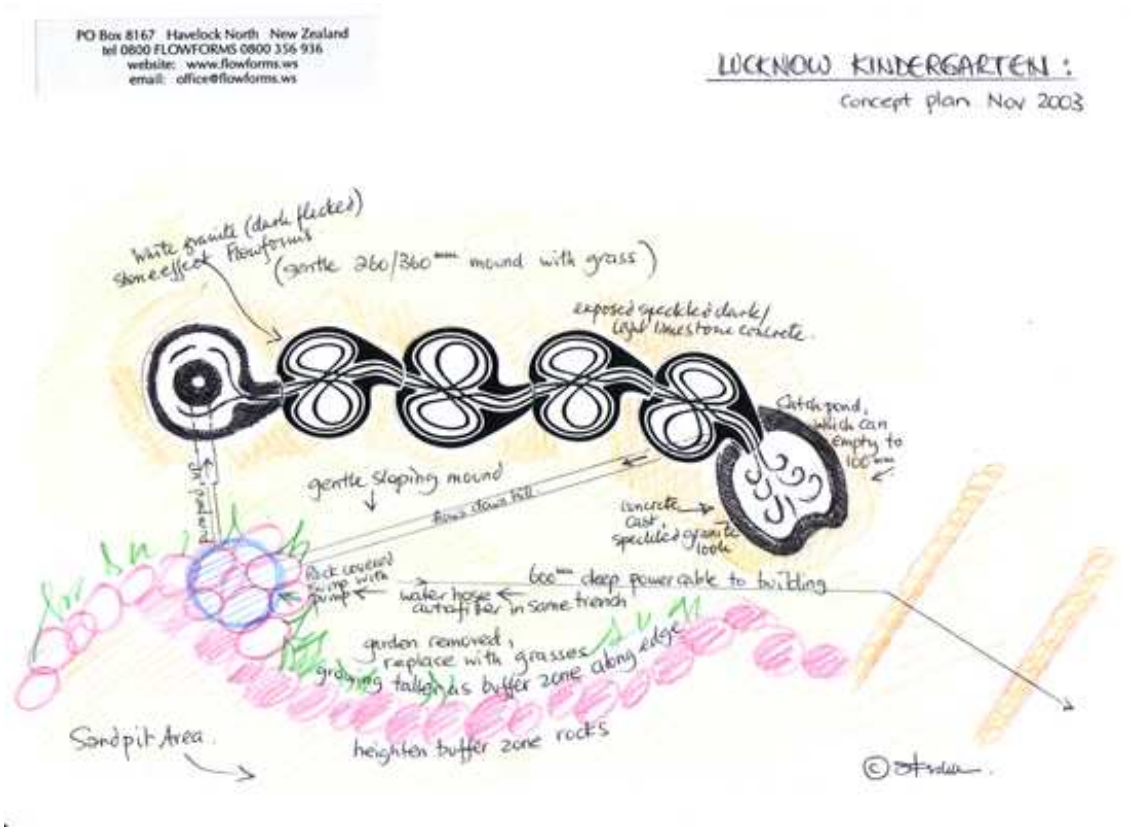
**Introduction**

Lucknow Kindergarten approached Design for Life with the concept of providing a running stream inside the garden of their Kindergarten. This was to promote water play with the children and assist them with taking small risks around water to build confidence. Given the low decile rating of the kindergarten, children have limited opportunity for nature experiences therefore Lucknow were looking at bringing a nature water experience to the children as a benefit.

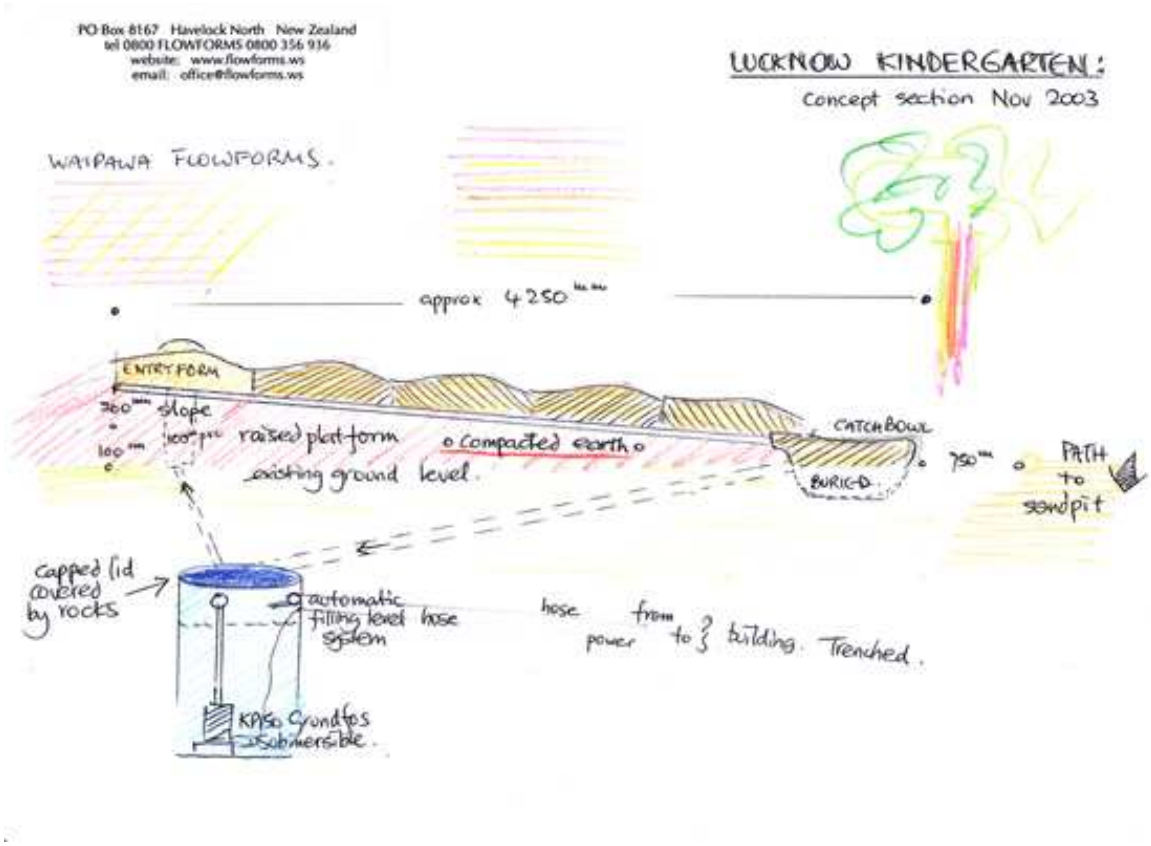
## Planning

A key requirement was the creation of a stream. The preferred Flowform Model for stream creation is the  Waipawa.  Based on this Flowform model we conceptualized plans that could be used for any subsequent or similar projects. Lucknow provided an estimated range of what they thought they could realistically fund raise. The conceptual drawings and knowledge of estimated budget allowed us to create an environment that provided the maximum water experience possible for the children. In this case we could provide five Flowforms consisting of an entry form, which allows water from the pump to enter the first Flowform, followed by a series of 4 additional Waipawa Flowforms alternating in pairs from left to right. Finally a catch bowl was combined with a sump to collect the water at the bottom of the sculptures with the water draining back to a sump. This setup is recommended for early childhood as it allows for a waterless system once the power is turned off. All water drains to the buried sump.

**Copy of elevated drawing**



**Copy of cross section**




Once funds had been raised, Landscapers and other contractors were coordinated to complete the project.

Initial Installation Planning Stage outlining angle and gradient from the catch bowl.

Sculptures being laid out on concrete blocks but preferred method is a stand.

Backfilling and landscaping around sculptures excluding the entry form.

Completed setup. The River Rocks are glued firmly together for child and sculpture safety.

**Reference**

**Other Project Sites in New Zealand include:**

- Raphael House – Wellington
- Hastings Rudolf Steiner Kindergarten
- Auckland Rudolf Steiner Kindergarten

- Peach Grove Intermediate Hamilton
- Christchurch Rudolf Steiner Kindergarten
- Olive House Kindergarten Hamilton
- North Shore early childhood centre, Auckland
- Awhina early childhood centre, Taradale NZ

Since the installation of the Lucknow Free Kindergarten 'Flowform Playground'

- Taradale Free Kindergarten, Hawkes Bay
- Akaroa Free Kindergarten, Christchurch
- Follett Street Kindergarten, Marton.

**Technical information regarding Waipawa Water Sculptures**

**Dimensions:**

Length: (Left Hand) 695mm (Right Hand) 690mm Width:640mm

Flow rate: 70/110 Litres per minute

Gradient: 1:13 or 77mm height for every 1000mm in length.

Foundations: Flat Concrete blocks. Preferred method is a continuous sloped stand.

Curve of Cascade: 15° maximum per Flowform

Weight: 12kg

Materials: sandstone by Rokisa™

**Foundations**
The foundations and stand for the cascade must be made accurate. It is critical that the correct water flow & rhythm is achieved for maximum efficiency. The measurements are as shown above and we supply an installation guide as a separate document to sub contractors. Most installations have a gentle slope of compacted earth to the correct gradient. The preferred and recommended method by Design for Life is a stand. This allows for correct gradient and joining of the Flowforms, easy placement. Simple backfilling and Landscaping only then needs to take place.

**Form Types**
An entry form will be required to initiate the correct water function at the top of the cascade. Left and Right Flowforms can then alternate or other patterns can be setup but these are more difficult to install. A catch bowl is common at the end of the run of Flowforms. The catch bowl must be sufficiently sized to allow for the correct amount of water to be supplied to the Flowforms. When the pump is turned off then the water will flow into the catch bowl and then drain to a sump in early childhood set-ups. The catch bowl needs to be sufficiently large enough to hold the correct amount of water. If a submersible pump is used there needs to be enough water to cover the pump at all times.

**Pumps**Correct Pump selection is crucial for a successful installation and operation of a Waipawa stream. Generally these are either submersible (in the water) or centrifugal (outside of the water) and need to be extremely robust.

In Early Childhood centres the sculptures are exposed to rough treatment and young children definitely put any installation to the test. A pump must be able to handle all sorts of materials that children will introduce in to the water flow of the sculptures. It is advisable that Design for Life supply the pump or at least supply the required specification to ensure correct purchase.

**Electricity**
Electricity is required in close proximity to the sculptures to power the pump. This should be installed by an authorized electrician and adhere to any safety and health standards.

**Sump**
We recommend buried sumps if you are concerned about child safety. This way, most of the water is beneath a lid, which is covered by rocks. When the Flowform is turned off, all the water runs into the sump and you have a dry environment!

**Top up float switch system**
A float switch is hidden in the sump. Water from ponds evaporates and inevitably water features splash a little. Children in early childhood centers will remove water from the system. We don't supply this as part of our 'package' but they can be easily obtained from a hardware merchant. A buried hose is required from a garden tap, this is attached it to the tank with the tap left turned on. Otherwise, you can easily top up your pond each week or so with your garden hose manually. When you prefer a hidden sump, it is advisable to have an automatic float switch filler.

**Filtration systems**
The water in early childhood environments can get clouded quickly by the introduction of debris and other materials from children. Those who wish to have clean water will need a filter of some sort.

**Landcaping**
There are a variety of ways of achieving a landscape that suits the needs of the situation:

- Safe play combined with learning about how to behave in the situation for safety.
- Maintenance of tidy and unmuddy surfaces
- Play that keeps the Flowform Playground™ in good working order (sandpits etc)

We will provide examples in another document.

Thank you

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