



StoraEnso

Partner of Stora  
Enso

# Arcadia Nursery

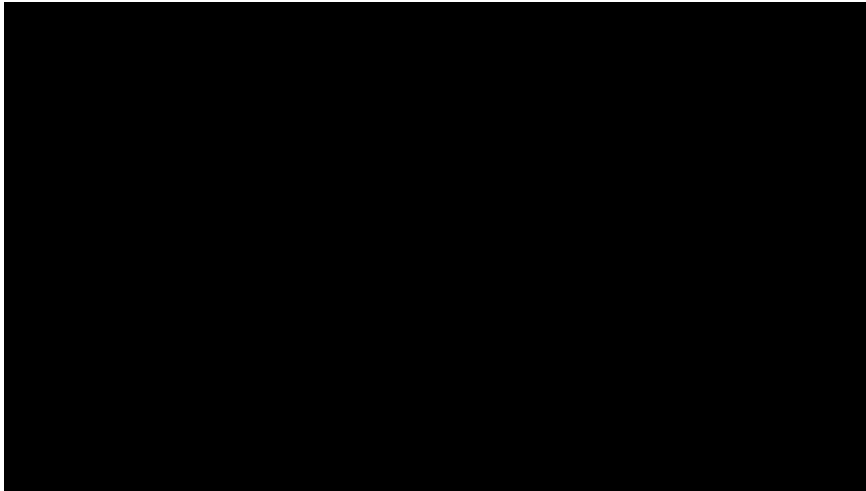
## Edinburgh, UK

**EURBAN**

Multi-award winning, purpose built. education facility at Edinburgh University's King's Buildings Campus is made with a Sylva CLT kit by Stora Enso.

The school was designed by Malcolm Fraser Architects and constructed by Balfour Beatty with timber engineering and installation by our partners: Eurban.

The nursery brings together two existing University childcare buildings into one purpose-built facility with an extensive outdoor play area providing early-years education for children of university staff, students and the general public, aged six weeks to five years.



### Design

The building is designed around the 'free-play' concept, that encourages age groups to mix and helps to develop children's confidence, independence and creativity. Three playrooms for different age groups are housed within three connected volumes defined by ribbed, trapezoidal roofs, the largest of which spans approximately 10 x 20m with no intermediate supports beneath. The application of Sylva CLT elements enabled the expressive roof forms and column free space beneath for the arrangement of rooms and play decks at different levels.

The free-flowing series of spaces, which can be opened up to suit the day's activities, is connected by a flexible circulation space with roof-light views up to the tree canopy above, and includes art rooms, a children's kitchen, raised cosy mezzanine spaces for quieter times, and a music and reading room. On the first floor an additional space has been incorporated for use by small groups of children participating in activities such as music, reading and IT. The adult accommodation comprises an office, family room and a staff room which overlooks the garden.

### BREAAM Excellent

Along with a requirement to achieve [BREAAM Excellent](#), the University of Edinburgh was keen to create a building that could act as educational tool in its own right where children could learn about approaching life in a sustainable manner.

**The renewable materials company**



StoraEnso

Careful consideration was given to the specification of all materials with the result that the materials specified are renewable, have low embodied energy and a minimal carbon footprint, whilst also creating a vapour-open, breathable building fabric with high air-tightness. This ensured that a high indoor air quality was achieved by minimising or eliminating products which emit low level toxicity.

The design stage BREEAM assessment achieved a high score of 82.2%, with material and pollution sections achieving a 100% score. It was of foremost importance that a healthy, calm environment was created for the children and the CLT structure, which is left exposed throughout, provided the perfect combination of a warm, tactile interior, whilst also using a natural, sustainable product that could structurally achieve the clear roof volumes required to ensure the mezzanines spaces were not compromised.

### Healthy

"Arcadia Nursery is an exemplar project which achieves excellence of design and build and is absolutely fit for purpose." Comments Wayne Probert, Sales & Marketing UK and Ireland, Stora Enso Wood Products. "It is very positive that CLT is increasingly being recognised for its ability to create a healthy internal environment which feels warm and safe, particularly in schools."

This is reinforced by a study carried out by proHolz Steiermark & holzcluster Steiermark, 2011 in relation to schools which shows that one of the advantages of solid timber construction and exposed timber surfaces is the reduction of stress levels in students. [Read more about this in our white paper.](#)

The study concluded that this is the "First medical evidence that timber as a construction material has a positive influence on human health." Externally each age group's playroom is clearly identifiable as a welcoming, contemporary domestic form which creates a sense of belonging and ownership for the children.

Direct views of the garden space are seen through the building and a welcoming reception leads through to a flexible central space with an open kitchen to the rear with a smaller children's kitchen providing a division and allowing the children to prepare food, including their home grown produce.

The outdoor space is formed into three distinct zones and is considered as another 'playroom' for the nursery, used every day by all age groups to encourage physical activity and engagement with nature. An 'enclosed' garden with a covered terrace which is directly accessed from the nursery building provides a space for children to play in all weathers. Several 'open play' features in the garden include grass steps, a bubble bridge, water pump, raised vegetable planters and a potting shed. A raised timber walkway provides a 'journey' through the trees of the wider landscape, which opens up to more adventurous play for the older children, with a rope bridge, play trees, log ladders and sand pit.

Continuing through this space leads to the final meadow zone with long grass and meadow flowers to encourage birds and insects and a willow arbour that provides an intimate picnic space for the children. The building's prime energy source is provided by the University Combined Heat and Power network.

### Awards

The Arcadia Nursery at Edinburgh University has received several prestigious awards for its innovative design and sustainable construction:

**Scottish Design Awards:** Best Education Building

**Wood Awards:** Education & Public Access category

**RIAS Awards:** Multiple awards including the Wood for Good & Forestry Commission Special Category Award for Best Use of Timber and the Resource Efficiency Award



StoraEnso



RIAS Awards - Several categories including best use of timber



Scottish Design Awards Best Education Building



Photo credit: Malcolm Fraser Architects / Angus Bremner

### General

**Delivery year**

2014

**Building type**

Education

**Area (m<sup>2</sup>)**

850



Photo credit: Malcolm Fraser Architects / Angus Bremner

### Products

**Products and Services**

Sylva™ CLT Floors and Roofs,  
Sylva™ CLT Walls

**Product volume (m<sup>3</sup>)**

290



StoraEnso

---

## Team

### **Partner of Stora Enso**

Eurban

### **Architect**

Malcolm Fraser Architects

### **Main contractor**

Balfour Beatty

### **Developer**

The University of Edinburgh

### **Structural Engineer**

Eurban

### **Specialist Timber Subcontractor**

Eurban