

Country / City **UK / London**
University / School **University of Greenwich / School of Design**
Academic year **2020**
Title of the project **Making Kilns**
Authors **Altan Dervish**

TECHNICAL DOSSIER

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| Title of the project | Making Kilns |
| Authors | Altan Dervish |
| Title of the course | MLA Landscape Architecture |
| Academic year | 2020 |
| Teaching Staff | Harry Bix, James Fox, Ed Wall |
| Department/Section/Program of belonging | Landscape Architecture and Urbanism [Greenwich] |
| University/School | University of Greenwich / School of Design |



Written statement, short description of the project in English, no more than 250 words

Making Kilns is a material ecologies oriented community led action. Its focus is on making a kiln landscape to learn about environment, in a development area of Canada Water [London] with teenagers of an educational charity, Global Generation. **The design is an adventure landscape of mud, clay, growing, burning and making.** [1] First, we **met and worked with the teenagers**, we **dug, gathered and molded clay**, and **built and fired a pit-kiln** - finding a profound appreciation for fire that is often absent in our urban environments. [2] Second, we developed the concept for the kiln landscape through clay modelling with the teenagers. **Their work produced inspirational designs that led the process** to make a working wood feed Khmer Kiln. [3] During the third stage I developed a wider masterplan proposal of rubble, soil and timber from existing trees - materials that would be used to fuel the kiln. The project values and arranges materials through creating landforms, ecologies, structures and fuel for firing the kilns. **The landscape works with the temporal and material cycles of kilns (rebuilding, burning, and making) and more natural processes of decaying, regenerating, and exploring** - all led by the interaction of young teenagers with landscape architects.
< **The studio brief was focused on designing for direct action to advance ecological justice and urban equity** >

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CLIMATE CHANGE AGAIN

11th International Biennial Landscape Barcelona

Barcelona September 2020
SCHOOL PRIZE



PROCESS OF MAKING

- 01- Stave Hill Map
- 02- Stave Hill Summit View
- 03- Ecological Park
- 04- Ecological Park Fence
- 05- Soil Section
- 06- Clay Extraction
- 07- Clay Mound
- 08- Ecological Park Bench
- 09- Grog, Clay, Water
- 10- Ecological Park Pond
- 11- Mixing Site
- 12- Ecological Park Pond Side
- 13- Journey To Canada Water
- 14- Stockwell Studio
- 15- Stave Hill Plan
- 16- Narrators Hand
- 17- Stave Hill Clay Tile
- 18- Backing Clay Tile
- 19- Rotherhithe Mapping
- 20- Printworks Yurt
- 21- Global Generators
- 22- Creative Chaos
- 23- Imagined Insects
- 24- Sour Eye
- 25- Inside The Yurt
- 26- Stockwell Studio Reflection
- 27- Recording The Process
- 28- Stave Hill Ecological Park Analysis



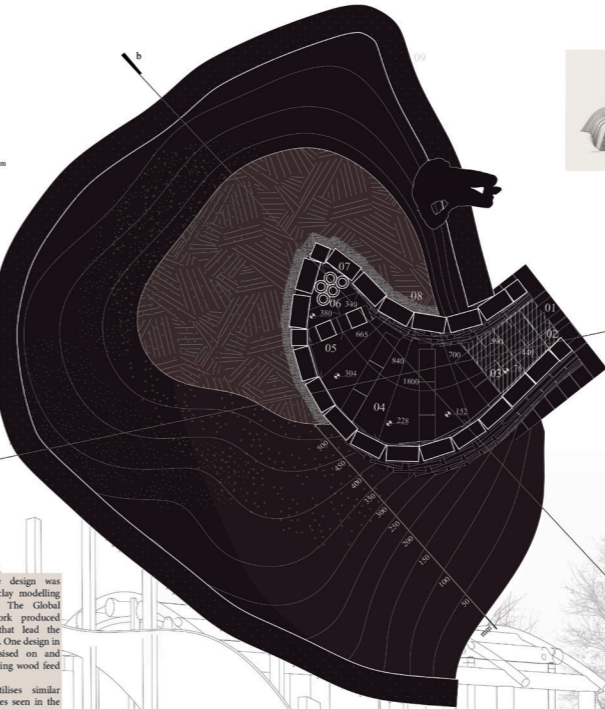
PAPER GARDEN KILN

The concept for the design was developed through a clay modelling making session with The Global Generators. Their work produced inspirational designs that lead the projects creative process. One design in particular was emphasised on and refined to make a working wood fired kiln.

This unique kiln utilises similar ceramic firing techniques seen in the Cambodian Khmer Kiln. It exposes the green-ware to open flames, which traditionally it is said the potter must imagine the flame path as it rushes through the kiln, and use this sense to paint the pieces with fire.

The kiln itself sits embedded in an earth mound, blending its form with the slopes. The mounds also provide dedicated planting space for an edible landscape.

- 01- Smoke Hole
- 02- Fuel Box
- 03- Fire Box (220 litres)
- 04- Fire Chamber (200 litres)
- 05- Hot Floor
- 06- Fire Chamber (200 litres)
- 07- Chimney
- 08- Insulation Material
- 09- Retaining Wall



ix The firing is the oldest method for the firing of pottery. The origin however are difficult to pin, supposed to have begun in East Asia. The technique and fuel used are amongst various studies patterns and in Africa.

x Some kilns widely used in India for making bricks. It is constructed in the shape of a dome, allowing a fire to be lit at the construction and packed with earth or mud to insulate the kiln.

xi Korean Draft kiln is an improved version of the open fire kiln. It has several openings at the side to control air and fuel. The heat from the combustion travels up and is forced back down to be transferred into the chimney.

xii Ancient kilns in the Yunnan hills of south China is a thin and long usually containing a tall chimney. This kiln consists of one long firing chamber, covered with smaller side stacking parts on one side, with a furnace at one end and a fire at the other. Firing time can vary from one day to several weeks.

xiii Bottle kilns were constructed by a tall brick tower over a typical bottle shape. The tabernacle was enclosed in a brick fire-clay jacket to protect them from the fire and impurities. Bottle kilns were typical of the French industrial landscape of the 19th century, where nearly all are preserved as listed buildings.

xiv Khmer Kilns are quite similar to the Japanese kiln in design. Traditionally these kilns were built by digging into the bank of a river. The most difficult part of the firing. The potter must imagine the flame path as it rushes through the kiln, and use this sense to paint the pieces with fire.

xv Masonry kiln or hearth kiln from north China, in historical periods when the dragon kiln dominated south China with some to have emerged in the 17th century. They are of approximately 475 to 221 BC, but are smaller and more compact.

xvi Shrove kilns invented in Shrove, France. Efficiently generating high-temperature of 1,200-1,250°C to produce waterproof cement, bricks and earthenware glazes. It usually features vertical chambers and a cross-wall design that shortens time, even with wood firing.

xvii Bull's Trench kiln developed in South Asia. It is a continuous moving kiln in which the fire is always burning in the 10 metres, supporting from below above the kiln. Another version is India's Urug kiln in Australia with a square foundation.

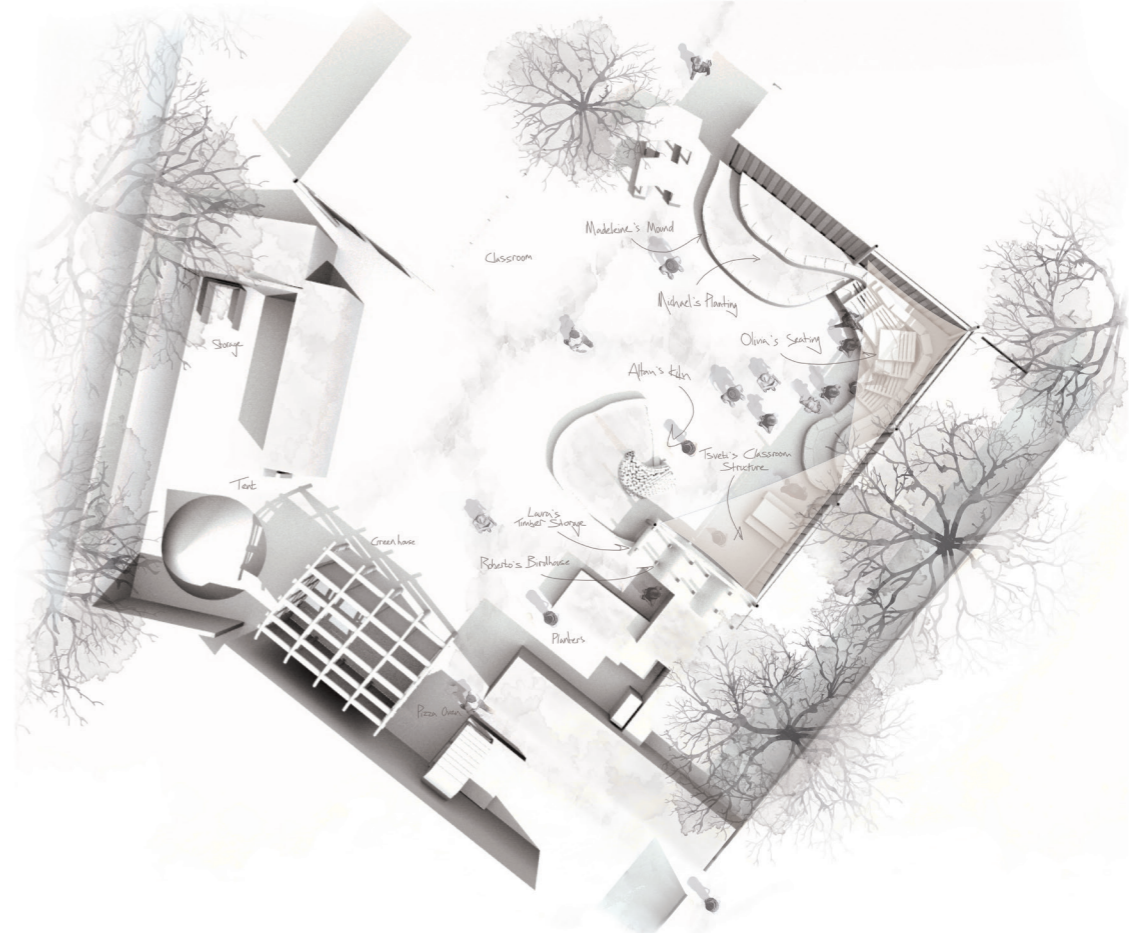


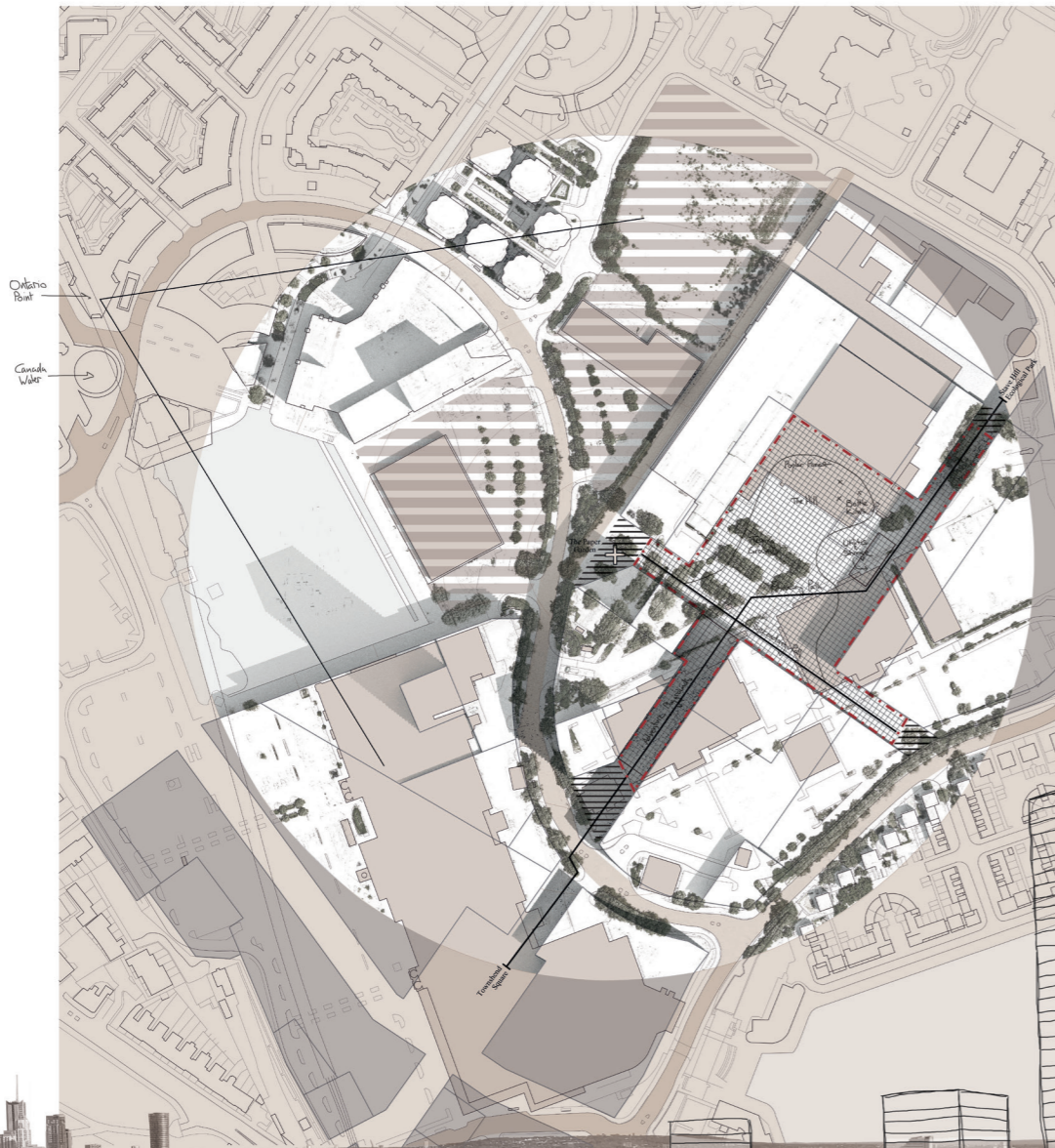
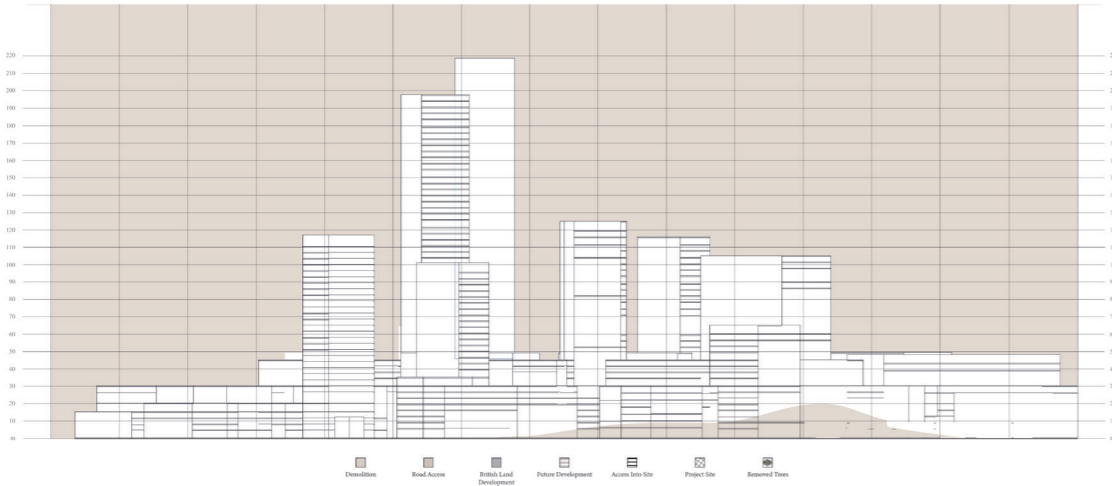
DEDE'S GARDEN KILN

- 01-Dede
- 02-The Garden
- 03-Kiln Build Site
- 04-Materials
- 05-Site Prep
- 06-Framework
- 07-Skeleton
- 08-Spanish Pebeo Clay
- 09-Moulding The Body
- 10-Chamber
- 11-Funnel
- 12-Damper
- 13-Tile Envelope
- 14-Scale Comparison
- 15-Ceramic Workshop
- 16-Dede's Cob Mix
- 17-Crack Repair
- 18-Inlet Flue & Ash Pit
- 19-Exposed Kiln
- 20-Buried Kiln
- 21-Firing Wires
- 22-Chair, Kiln, Wood
- 23-The Firing
- 24-Smoke
- 25-Fire
- 26-Insulated Kiln
- 27-Decayed Kiln
- 28-Ruins



Spatial relationship between staker, kiln and flue. 4 hour burning cycle begins. Warning fire produces large amounts of smoke, dying out at higher temperatures. Tip of flame inside the chamber is a sign of successful air flow. The kiln after emergency insulation measure when clay began to explode. The kiln after a long period of drowse, and carbon fires. The temple to the fire gods.





Children lead the way, guiding the ritual to inner creativity.

