Slow Waste: Wood Pallets in the Expanded Field

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> "Materials are reintroduced after use into the process of assimilation, filtration, storage, and production to continue their roles in nature's cycles."
>
> —John T. Lyle

This project expands pallet use by slowing its waste process to serve non-human entities and functions. The work draws inspiration from the discipline of forest science to allow wood to perform more diverse ecological functions, such as water storage, soil retention, sheltering and perching to name a few. Other wood materials include wood floors from a recently renovated mill (estimated at 150 yrs old), large paper tubes, scrap wood and paper. The wildflowers serve both human and non-human entities, but with a particular aim to challenge and share with the public a more ecological configuration between familiar urban wood elements and more nuanced ecological processes.

Pallets are part of a fast-paced urban society, and its production, use and waste aims to sustain reductive tasks to benefit the human condition. Yet, as this project considers, the systems of resource and waste are fundamentally tied to the ecological world that profit from slower temporal transitions and processes. Movements toward "slow food" and "slowing stormwater" are part of a growing agenda to restore a dialog between people and ecology, but still remains largely undervalued. This design project considers how waste too could take advantage of these perspectives by extending decay for the benefit of an ecological habitat as well as human delight.

Waste materials like pallets are often expedited from place to place and more significantly from form to form. It is estimated that 4 billion pallets are in circulation every day in the U.S. and there is increasing effort to recycle or to repurpose these materials.[1] However, the process and method are limited, with 75% of the repurposed materials either being turned into mulch or fuel.[2] Statistics like these show how pallets are simplified and hastened in its return to the environment.

The etymological root of "waste" embodies the concept of "abandonment" or "to leave," which implies a boundary between the human loci and where waste ends up. Even when we try to circumvent this in-between world by reusing or repurposing materials to more ecological systems, they are often narrowly interpreted as carbon storage, energy, and/or nutrients. Privileging certain ecological processes that suit large-scale industrial processes are reducing whole materials into their parts prematurely. In opposition, this project demonstrates a more direct ecologically driven response by including more diverse, open-ended reuse of pallet materials by all species - it celebrates maturation.

ENDNOTES

1. Buehlmann, U., Araman, P., & Bush, R. (2010). "Pallet re-use and recycling saves high value material from landfills." *Engagement Matters* 2(1):8,10, US. Forest Service, Southern Research Station.

2. Araman, P. (2012). "Wood Pallets – An Important U.S. Industrial Product." Presented at 2nd Biennial International Conference on Processing Technologies for the Biobased Products Industries, November 7th, 2012, St Simons Island, Georgia, 69.

PALLETS IN THE EXPANDED FIELD

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ASSOCIATION OF COLLEGIATE SCHOOLS OF ARCHITECTURE (ACSA) NATIONAL CONFERENCE 2018, DENVER, COLORADO "THE ETHICAL IMPERATIVE"
PROJECT SESSION "ARCHITECTURE IN THE EXPANDED FIELD, FROM INTERIORS TO LANDSCAPES"

40" x 48" typical pallet


Foundation


Collecting Pallets

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-John T. Lyle

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1 Brashinaro, V., Kramer, P., & Ruiz, P. (2013). Pallet re-use and recycling saves high value material from landfills. Engagement Matters, 37(1/4), 10. Forest Service, Southern Research Station.

2 Kramer, P. (2012). "Wood Pallets – An Important U.S. Industrial Product." Presented at 2nd Biennial International Conference on Processing Technologies for the Biobased Products Industries, November 7th, 2012, St Simons Island, Georgia, 64.


Dragonfly


Pollinator


Wildflowers


CNC/Rhino/Grasshopper


Inner Garden


Outer Garden

Planting Medium:
Compost and loam mix filled roughly 8" deep planters created by the pallets. The planter boxes contain and slow water flow through absorption.

Summer

Sedums:
The (4) corners for of the project were planted with sedum plants for architectural students to harvest as tree models for their design projects.

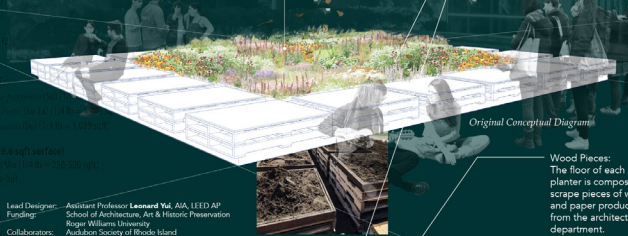
Urban Interface:
Sanded and painted marine-grade plywood. Textured CNC holes create interest and inviting ornamentation to provide a place for open-ended seating.

Fall


Pollinator Garden

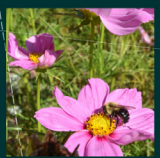
Flooring Frames:
Roughly 150 year old wood flooring from a local mill. The wood is well seasoned from the factory and offers a naturally rich dark brown color to frame the bright flowers. Each frame has two layers.

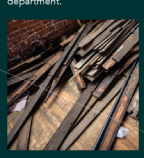

Fall Inner Garden


Original Conceptual Diagram

Wood Pieces:
The floor of each planter is composed of scrape pieces of wood and paper products from the architecture department.


Braided Outer Garden






150yr Old Mill Flooring

Lead Designer: Assistant Professor **Leonard Yui**, AIA, LEED AP
Funding: School of Architecture, Art & Historic Preservation
Roger Williams University
Collaborators: Audubon Society of Rhode Island
Scott Ruhren, Phd conservation biologist
RWU Facilities: Electrical, Water line, Soil Transport
John Tameo, Director of Facilities
Matt Clement, Grounds Supervisor
Historical Flooring from the former
American Tourister building, Warren, Rhode Island
Thomas Remmes, Project Manager
Brady Sullivan Properties
Home Depot & Lowes - Pallet Donations
Select Student Designers and Assistants
Vernon Apgar - CNC/Rhino/Grasshopper
David Kitchen - Graduate Assistants
Rachel Foley - Graduate Assistants
Skyler Moncada - Pallet Frames
Daniel Nemes - Pallet Frames
Countless other dedicated architecture students