

**PUBL66**

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volve designs

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## Urban and Public Design

### Plant Wall

Plant Wall was an exercise in implementing and validating a self developed design strategy for the use of plastic waste in product design, Volve. (See info graphic for Volve: Evolve, Revolve, and Involve). Food packaging is one of the largest culprits of single use plastic waste, and Plant wall targets this problematic material.

The ultimate intent of Plant Wall is to grow food in household or other urban settings in order to eliminate some of the need for food packaging, while utilizing the unique aspects of plastic waste to make a beautiful object. The intent is also to build the product from food packaging while also reducing the need for said packaging. Future versions of Plant Wall will have user options of fully Hydroponic or Soil based, Fully automated (watering and light) or fully interactive (user water and light control). In researching users, many enjoy the engagement of caring for plants while others want the benefits of a plant without the time required for care.

I wanted to design and make something that would take advantage of the affordances discovered when Evolving plastic waste.

I planned to show the level of variation one can obtain when utilizing the material's color flow and how the chaotic color variation could coincide and enhance a uniform pattern.

I have always enjoyed dichotomy in design: large with small, curves with straight, smooth with rough. I wanted to emphasize something like a thin plastic bag turning into a solid rigid object. I wanted the object to make an impression and I felt that size was one way to achieve that. However, since I could only make relatively small parts, I designed something modular.

I allowed my waste materials, the exploration of waste items, and interactions with my community to drive the design. I spent the next few months in a traditional design process. Many hours were spent researching other designs, in group critiques, ideating, iterating shape, form, function, understanding market space, application environments and potential users. The result is a compelling modular dividing wall structure filled with plant life and color, showcasing the far-reaching possibilities of craft-scale product design using waste materials that are perceived to have no value.

For further detail, please feel free to browse the entire thesis included in the link below. Plant wall detailed on Pages 46-63.

**Source of plastic:** Plant Wall is made from plastic waste from 5 households in my community over 2-3 months. The items chosen are not typically collected in my community using our traditional curbside recycling infrastructure.

**Type of plastic:** Plant Wall is HDPE and LLDPE film (plastic Bags) associated with food and other packaging. Other small HDPE items such as bottle caps were also incorporated.

**Other Materials Involved:** The Frame is steel. Prototype modules are fastened with 2 stainless steel screws and nuts at each joint. Future development would be click together with no fasteners.

**Dimensions:** Module= Approx 15cm x 15cm x 15cm @ .23 KG . Finished wall = Approx 225cm x 225 cm x 15cm 23 KG plastic.

**Already in production?:** No

**Produced by:** The unit was produced by me in my Garage.

**Video presentation of the project:** <https://youtu.be/6SfT--rF6v0>

**Did you participate in other contests with the same project?:**

no

**Website:**

**Link all'application:**

<https://drive.google.com/open?id=1-cqbGqOY1KLh4t2kzXcWwURMM4-o9djl>