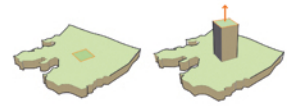


EXTRUSION



Overview

The Project seeks to explore the versatility of concrete, its material properties and its potential for a monolithic language and construction. The Project is an emotive response to the societal shift from living in rural conditions to urban ones. Approximately 40% of the population of the Republic of Ireland live within a 100 km radius of Dublin city centre. Populations in rural areas are in decline, thus a connection to the landscape and nature will be diminished. A romantic trail which has found a commonplace in Irish culture will be lost. The Project proposes an interpretive centre of landscape and nature so that the nearby city population can learn, rediscover and study nature and thus reconnect with the landscape. The project located in a rural coastal area replaces a recently built lighthouse and seeks to give this heroic typology a new expression and hybrid function. Many lighthouses have become obsolete due to new technologies in the field of marine navigation, by investing lighthouses with other functions this typology can be reinvigorated. The project located in a rural coastal area replaces a recently built lighthouse and seeks to give this heroic typology a new expression and hybrid function. Many lighthouses have become obsolete due to new technologies in the field of marine navigation, by investing lighthouses with other functions this typology can be reinvigorated.

Landscape

The building seeks to create an environment where man and nature meet and coexist harmoniously. Boundaries between inside and outside are blurred. The material properties of concrete are combined with natural materials and are exploited to create an image of a landscape. The building is perceived as a form extruded from the landscape which relates the properties aspect and ecosystems inherent in the landscape. The natural world and its creatures inhabit the building, the world of man becomes a transient visitor. The exterior walls overtime will become inhabited by insects and plant life. The vegetation causes the image of the building to change with seasons, weather patterns and time. That which is made by man and that which is formed by nature become indistinguishable of time. In the upper levels birds nest in the exterior walls similar to a cliff face.

Construction

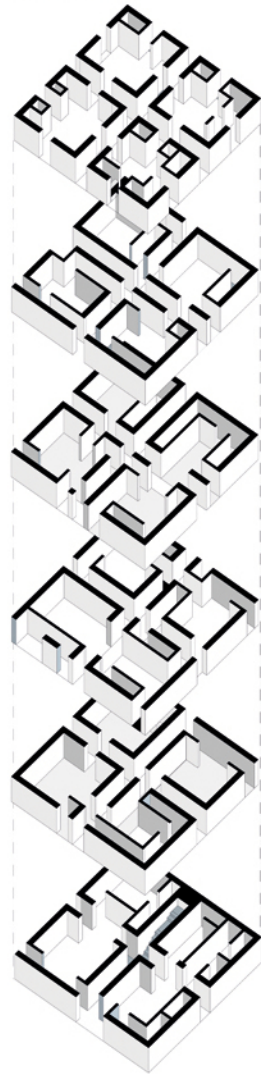
The construction process explores the complexity of materiality of a single constructive element. Form work is built from compressed hay bales and soil from the immediate area, both prominent elements in the landscape. Concrete is then poured into this mould and after the curing process the hay bales are then carved out using a chain saw. A layer of hay is retained in areas for insulation and is expressed with a different language free from the confines of structure. Where the concrete is expressed it emulates mineral formation in its structure, the earth and the concrete exchange their properties. The structure is monolithic and the scale and language of the spaces is reflected by this.

Tower

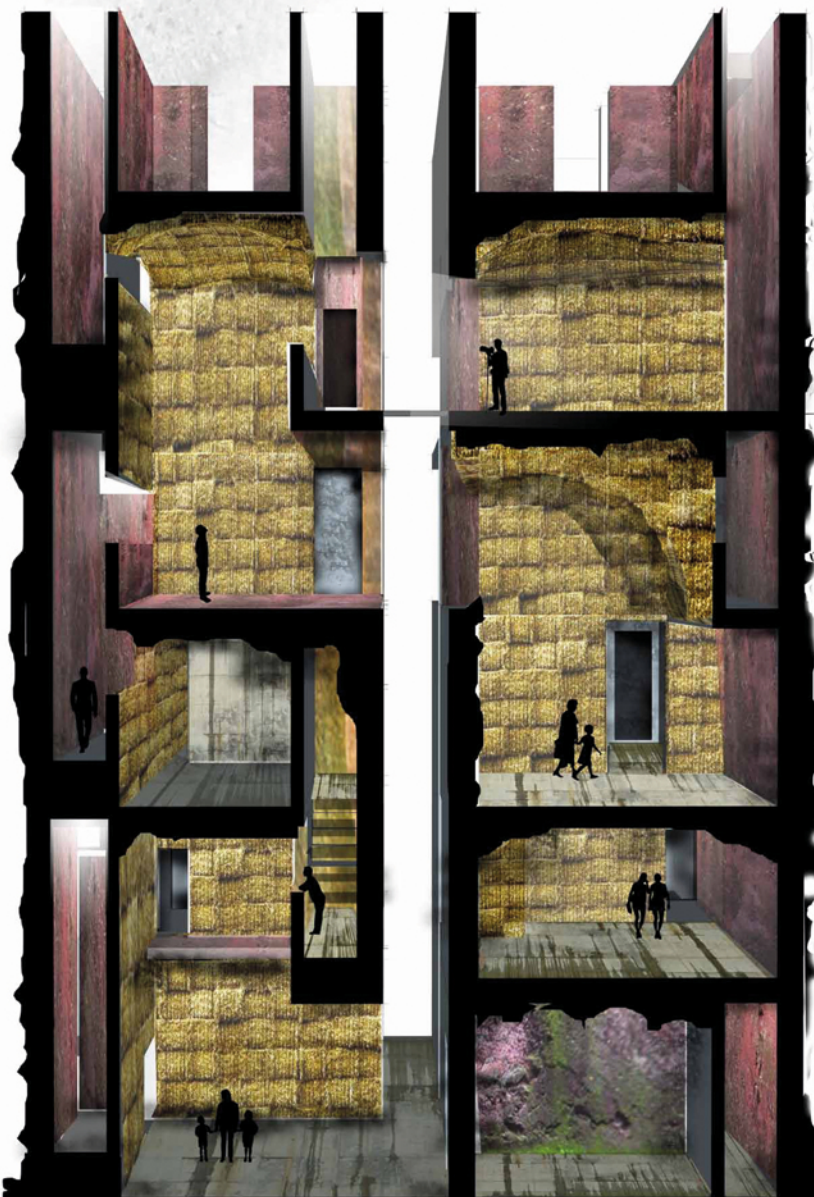
The tower as recognized by Leach is an existing typology in the landscape of Ireland. Historically lighthouses and towers have been displayed a being heroically dominant over the landscape, a constant reminder of mans presence on earth. Theoretically a tower recovers the space occupied by the buildings footprint as many times as the number of floors the tower has. The project plays on this idea and literally recreates the landscape six times over. The tower assumes the image of a monolith extruded from the earth.

Labyrinth

The square plan reflects and ordered subject in the complexity and chaos of nature. The scale of this square is denoted by the structural properties of the construction process. The plan is a play on solid and void, positive and negative space. A path through the labyrinthine spaces culminates in a roof terrace where the experience of nature is almost elevated to become spiritual. A separate stairs brings you from the roof to the ground level and the journey is complete.

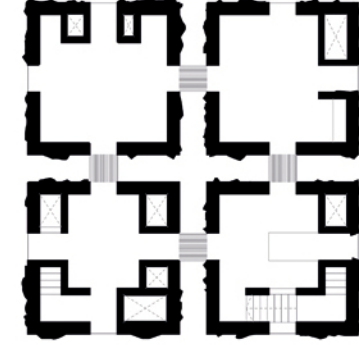
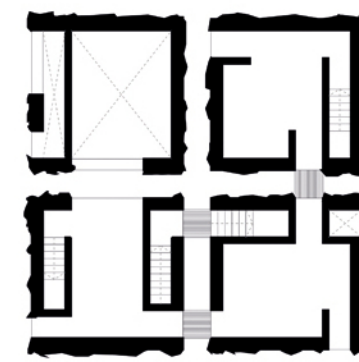
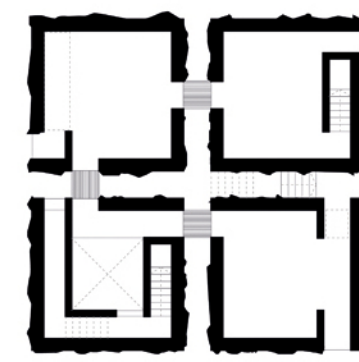
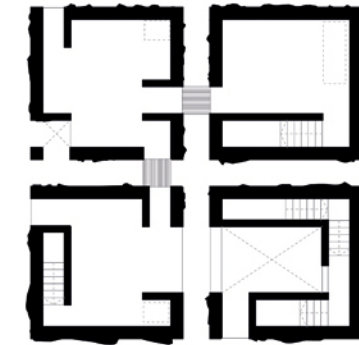
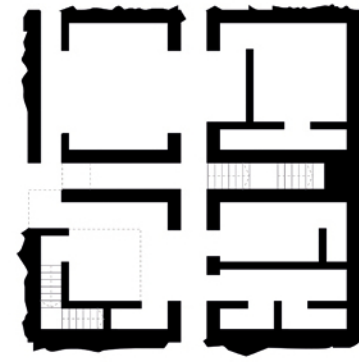


APPROACH TO TOWER



PLANS

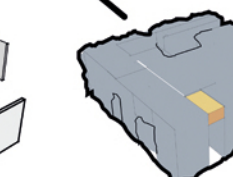
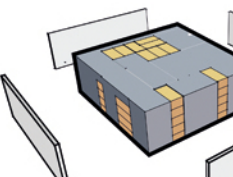
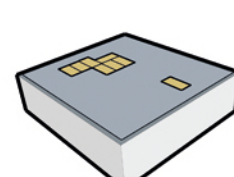
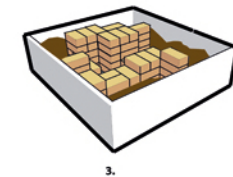
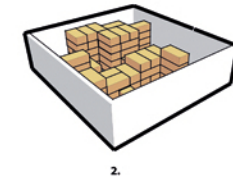
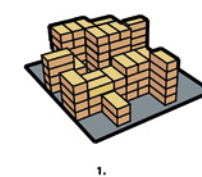
Scale 1:100



CONSTRUCTION

The construction process explores the complexity of materiality of a single constructive element. Form work is built from compressed hay bales and soil from the immediate area, both prominent elements in the landscape. Concrete is then poured into this mould and after the curing process the hay bales are then carved out using a chain saw. A layer of hay is retained in areas for insulation and is expressed with a different language free from the confines of structure. Where the concrete is expressed it emulates mineral formation in its structure, the earth and the concrete exchange their properties.

1. Inverted space is created by stacking compressed bales of hay. Different types of bales lend themselves to different types of spaces. The bale of hay provides a module to work from.
2. In the higher levels of the monolith a form work is built around the hay structure. Steel bars which are spaced one at every metre at floor level tie the formwork together at each end. These steel bars are used during construction to hold the formwork in place. They then become the reinforcing structure to the concrete.
3. Soil taken from the immediate area and excavations for the foundations is placed into the form work and compressed to the edges.
4. Concrete is then poured into the mould created and allowed to cure.
5. The form work is reusable as the soil acts as a buffer. The reusable form work is then removed along with excess soil.
6. The resulting mass emulates mineral formation in its structure and appearance using different mixes of concrete different colors are added to the different pours. The result is a series of layers of color in the concrete resembling a geological section. The color in the concrete allow you to decipher what level of the monolith you are on.
7. The interior spaces made with the hay bales are carved out using a chain saw. In areas the concrete is exposed. The hay bales act as an insulation and acquire a different language to the concrete structure.



A. Worms eye view of ground floor level.

B. Detailed section of wall

The wall is inhabited by plant life, insects and birds nest in designed openings.

The concrete is layered with different colors and aggregates. In some areas it shines and sparkles catching the light.

In some areas the hay bales are preserved and used for insulation.

Steel bars which are spaced one at every metre at floor level tie the formwork together at each end. These steel bars are used during construction to hold the formwork in place. They then become the reinforcing structure to the concrete and are left exposed on the exterior wall a constant reminder of the expression of structure and construction process. These bars not only give the monolith a sculptural aspect, birds can perch on them and plants can use them as support.

C. Front elevation.

The elevation shows the layers of concrete with different mixes and aggregates. The monolith thus resembles an extrusion of the topography. Earth and concrete exchange their properties and aesthetic.

D. Front elevation after a duration of time.

The elevation and image of the building changes over time as nature takes over the buildings surface becomes covered in plant life. This plant life blooms in certain seasons and weather conditions thus the buildings image changes according to these factors. The image of the building is ephemeral.

