Practice

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From *Terra Incognita* to *Terra Firma:* The contemporary rural landscape can no longer be represented by a concept of the whole, posited as a natural, cohesive and at times, sublime counterpoint to expanding nodes of urban conurbation. It is instead perhaps more clearly defined as a complex, fragmented, cultural and productive territory that bears the marks and legacy of continuous occupation. This primarily agricultural landscape is also increasingly a witness to the ruthless, disciplined and efficient surface organisation of contemporary economic and social culture in the form of suburbanisation, excavation, quarrying, harvesting, road building, drainage, intensive farming, forestry and related land management practices. It is by these means that we constantly re-order and re-cast the landscape around us into a network of surfaces and lines not unlike those operating in our cities. These applied strata are in turn re-territorialised by a mosaic of tangible and intangible boundaries, of incidental surfaces and lines operating above and below the ground, in the form of voids, topographical aberrations, geological formations, archaeology, memory. The resulting seams, edges and margins, often straddling zones of difference, are possible sites of architectural intervention, capable of establishing and re-forging a new connectivity and continuity through the intensification of interaction between landscape and settlement. THE BOORA COMPLEX: The Boora Complex is such a margin, albeit operating at both a geographical and territorial scale. A necklace of raised bogs, a vast peatland world, it straddles the central plain of Ireland between the river Liffey and the Shannon. The organised harvesting of the bog for the production of energy by Bord na Móna, 80% of which occurs within the raised bogs of the central midlands, rests alongside the building of the hydro-electric power station at Ardnacrusha in the mid-1920s as one of the emblematic constructs that heralded the arrival of the modern project in Ireland. This landscape has, therefore, played a constant and determining role in our re-imagining of the interdependent and symbiotic relationship that exists between urban and rural, and as such, is a suitable site for interpreting a new 'super-rural' condition. Today it continues to provide 49% of our indigenous energy requirements, as well as the raw material for horticulture in the form of peat and peat-based products. It has established an unrivalled infrastructure network of roads, canals, industrial railways, power stations and small settlements co-existing alongside an extraordinary diverse wetland habitat and ecology. THE FUTURE: The bog will, over the course of the next thirty years, come to the end of its productive life and the future potential of this expansive, open territory must be considered, as little value can now be derived from turning it to grassland. Like a great *tabula rasa*, this emerging post-productive terrain stretches out over some 80,000 hectares of cutaway bog. The potential exists to construct a new productive landscape, capable of supporting a self-sustaining and self-sufficient community of small settlements, co-opting and adapting extensive existing infrastructure in pursuit of the most prized commodities of our time—energy and food. An organisation that is established in an integrated and environmentally stable manner preserves and builds upon existing biodiversity while providing a new vision for super-rural living, in what could be considered a new county.

64,000

The proposed new population of 64,000 established across the 'Boora Complex' would make it the 16th most populous county in the Republic of Ireland and the 22nd in terms of land area.

Notes

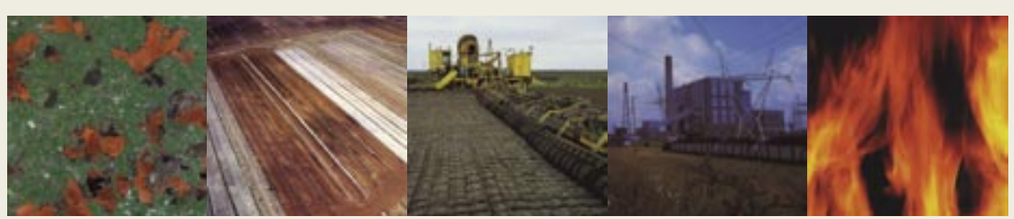
Bog before and during peat extraction

Scenario

16% of the land area of Ireland is covered in both blanket and raised bog, covering an area totalling approximately 1,340,000 hectares. The raised bogs of the central midlands represent 80% of all commercially harvested bog, with 14.5 million cubic metres of milled peat being extracted annually for the finite production of energy through the burning of peat as a fossil fuel.

While Ireland imports 86% of its total energy requirements, 49% of the energy that we generate ourselves comes from burning peat in the thermal power plants located around the central midlands. In accordance with the Kyoto Protocol, 13.2% of Ireland's energy must come from renewable sources by 2010; currently only 6% of energy is derived from renewables. We also maintain only 237 hectares of protected horticulture, importing a total of €600 million of edible horticulture and 70% of all organic produce annually. This is primarily due to our dependency on expensive energy sources, rendering the maintenance of extensive greenhouse structures prohibitively expensive and economically unviable.

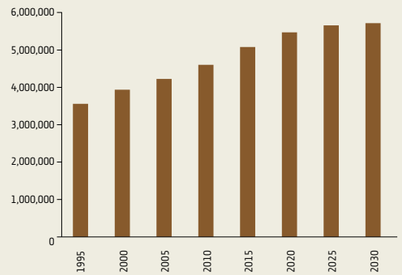
16% of the land area of Ireland is bog
Total area of bog: 1,340,000 hectares
11.3% blanket bog: 940,000 hectares
3.7% raised bog: 306,000 hectares
1.0% fen: 94,000 hectares
80,000 hectares of post-production land by 2030



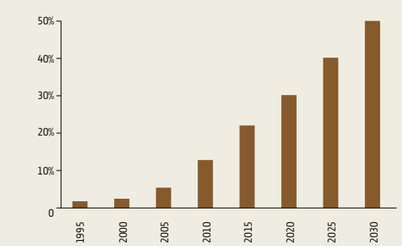
Extraction to consumption

Condition

The state-owned company Bord na Móna owns 7% of Ireland's peatlands. After it has completed peat extraction in 2030, up to 80,000 hectares will become 'cutaway' or depleted bog, creating the opportunity for a new landscape dedicated to the production of renewable energy, through the production of various forms of biomass complemented by wind power and protected food production to offset imports.



Ireland's projected population increase



Ireland's renewable energy commitment (Kyoto Protocol)

Boora Complex, existing infrastructure: 4 thermal power plants, 4 fuel processing plants, Royal and Grand canals, N52 and N62 national roads, 3 intercity rail-lines, 1,365km of industrial narrow-gauge rail.

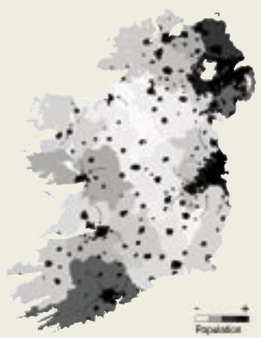
From post-production to productive landscape

Proposition

By 2030, the vast, open wetland territory of Ireland's Boora Complex will be ready for re-use. This nascent landscape offers an unrivalled opportunity to re-imagine and reconfigure our relationship with the land, without address to established patterns of exploitation or occupation. The proposal explores the possibility of a new symbiotic relationship for super-rural communities forged in tandem with a productive landscape. It is a relationship that successfully exploits the remnants of an inherited industrial infrastructure with human enterprise, in an emerging terrain dedicated to the production of both food and energy.

Structure

The entire landscape is to be divided along the lines of a 100-hectare grid, creating viable entities, each of which will incorporate an individually diverse pattern of land use. Each entity is in turn provided with a production facility, or storehouse, to manage bio-culture, silvi-culture and horticulture. The resultant biomass is used to generate energy from existing thermal power plants, displacing the current non renewable source of extracted milled peat.

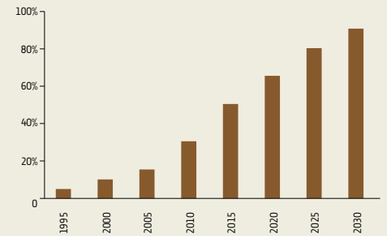


Migration to urban areas 2006

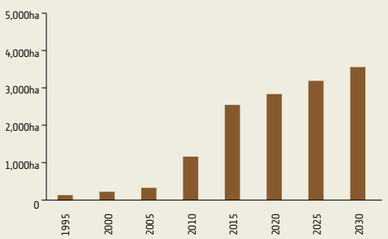
Migration to the land 2030

Area Dublin Region:	**92,100 ha**	**Population: 1,200,000**
Area Boora Complex:	**95,000 ha**	**Population: 0 (2006)**

100-hectare grid + 1-hectare storehouses

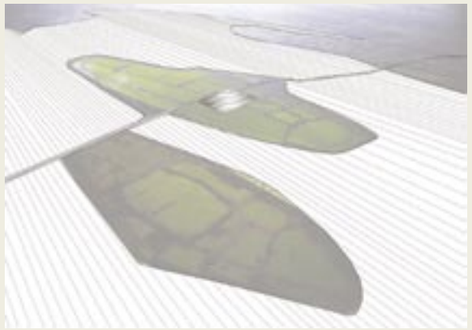


Availability of post-production bog (Bord na Móna)



Area of protected horticulture production

Mosaic of new land uses



Cutaway peatland

Land ready for re-use

Protected horticulture will increase from 300 hectares to 3,600, an increase of 1,200%

By 2010, 13.2% of Ireland's energy needs must come from renewable sources

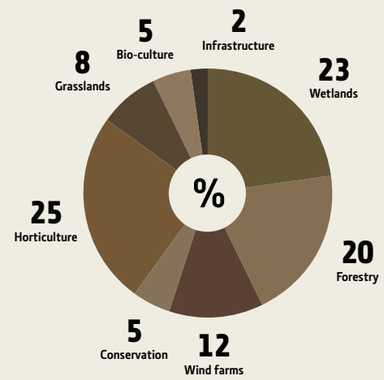
Geological substratum

Emerging Terrain

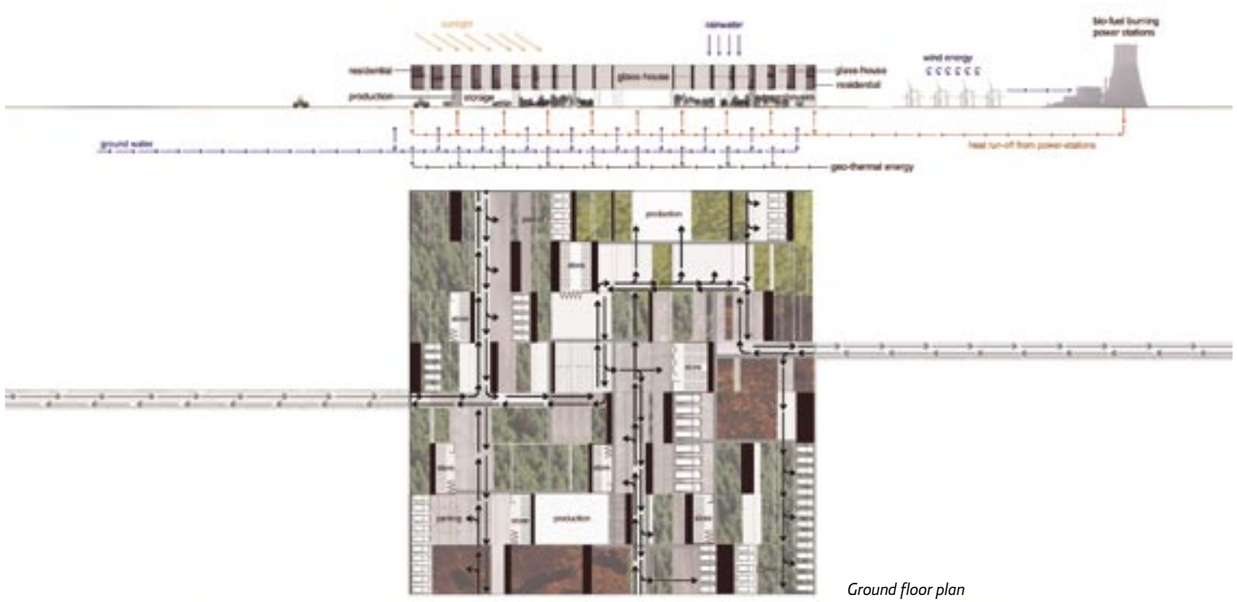
The vast areas of cutaway bog that remain under single state ownership offer the opportunity for the planning and organisation of this new region as a whole. As cutaway bogs result in a complex environment, they naturally lend themselves to a mosaic of land-uses determined by varying ground conditions such as peat type and depth, sub-peat mineral soil, drainage, hydrology and the geological sub-stratum.

Post-production

The land will be divided into diverse holdings combining varying areas of wetland, forestry, windfarms, horticulture, grassland, bio-culture and infrastructure, while associated non-productive conservation areas will be linked by natural ecology corridors, to form a networked land-bank large enough to be considered a wilderness park.



Boora Complex land use 2030



Ground floor plan

Landscape in transition 2006-2030

Storehouse and generated landscape

Storehouse & generated landscape

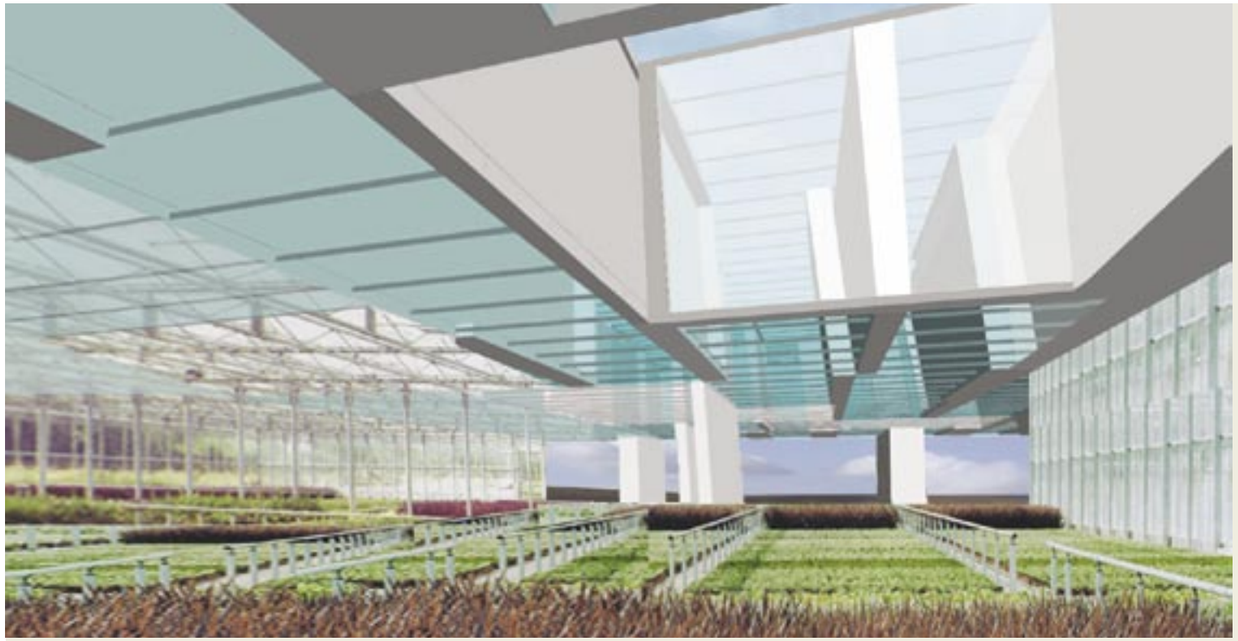
It is proposed to build 800 storehouses across the Boora Complex, along established lines of communication. Each house has a footprint of 1 hectare and a related hinterland of 100 hectares.

Each storehouse is formed from 20 x 1,200m² plots set over three levels, each of which can accommodate two dwellings and the associated storage and production facilities for bio-culture, silviculture and horticulture, creating a community of some 80 people.

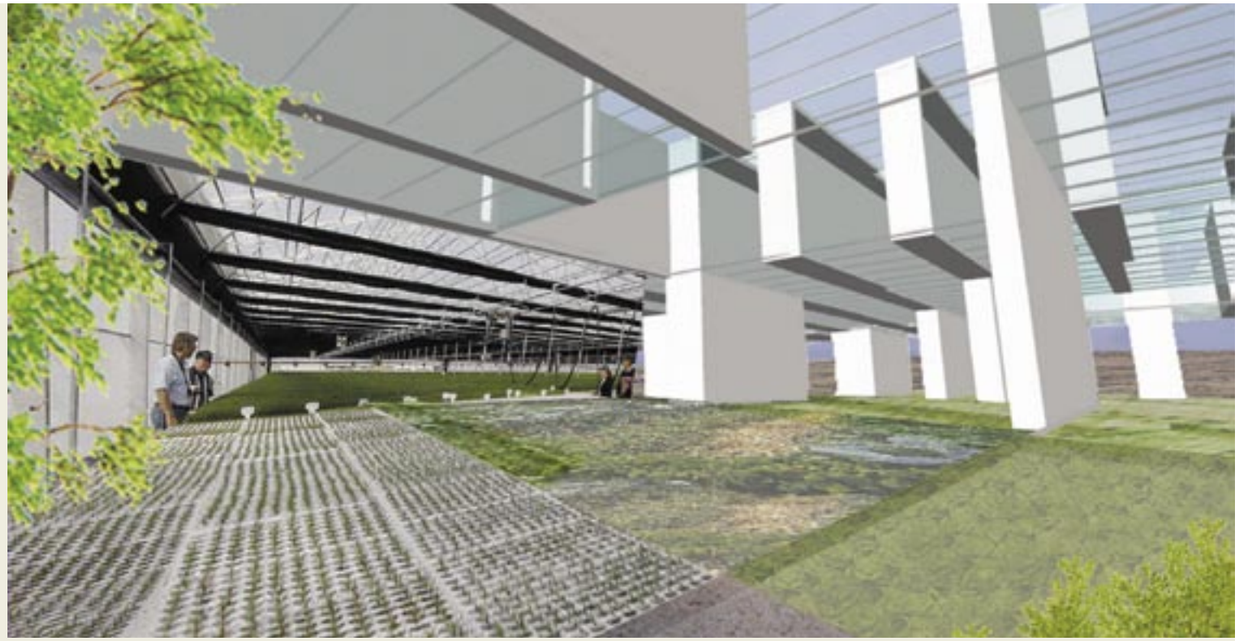
The storehouses are connected by the existing rail infrastructure and into the electricity grid, allowing for the efficient transfer of energy and residual heat between power plant and storehouse.

The resultant combination of residual heat and energy, an abundant natural water supply and prepared peat soils and horticultural products makes for an ideal environment for the production of food. In all 64,000 people would be evenly distributed across this emerging landscape.

Section through storehouse



Ground Floor Level – Production/Storage



Ground Floor Level – Production/Storage

Section through storehouse

Ground Floor Level – Residential/Glass-House

Second Floor Level – Residential

Second Floor Level – Residential

Third Floor Level – Residential

If we were to remove all our existing urban settlements, the entire predicted future population of Ireland could live at storehouse density in 2030 while building on only 1% of the available land area. Based on this proposal, through the creation of 69,702 holdings, Ireland could sustain a population of 5.6 million.

Area of Republic of Ireland =	6,970,200 hectares
6,970,200 / 100 =	69,702 holdings
80 people per storhouse 69,702 x 80 =	5,576,160 people