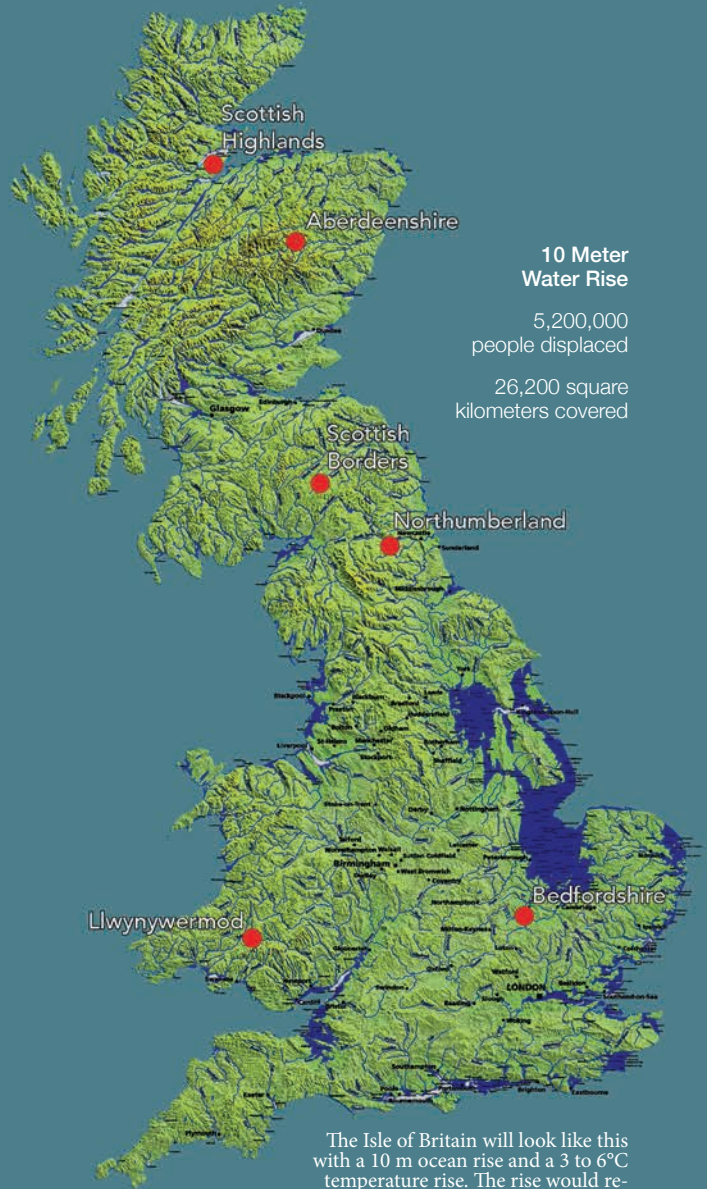


• Helen's Town

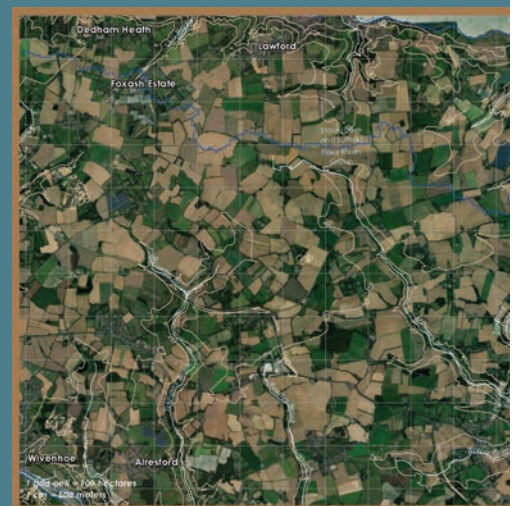
a biocultural response to heat stress on the Island of Britain

a work by Newton Harrison

A planetary trial by fire
of our own making is happening
Fifty years of Helen and my work
all palliative
community by community
city after city sometimes a country
sometimes a bioregion or subcontinent
everything we do insufficient
I am seeing a six-degree temperature rise
I am seeing human depopulation
mainly the choice of women
assisted by the accident of disease
I am seeing markets disorganized
desertification interruptions in production
I am seeing a one meter ocean rise
I am seeing a billion people displaced
In assembling these seeings of mine
scarcity dominates human civility and
social structures break down
rising from these ashes
what could a small community be like
as a counter argument to
these dystopic imaginings
now shared in part by many
I am imagining a small country
itself committed to moving
through this trial by fire
with its people civility ecology intact
I am imagining this country
agreeing to support fiscally
and in contributions of lands
a small town that expresses
what will live well in this new climate
and reveal how this community
can live in abundance
A small community founded like no other
for this time that is like no other
I may be looking for the miraculous
where small countries
like Sweden or Switzerland
especially like Britain
are able to see this small town
benefitting their futures
All that follows is rumination
on how to proceed

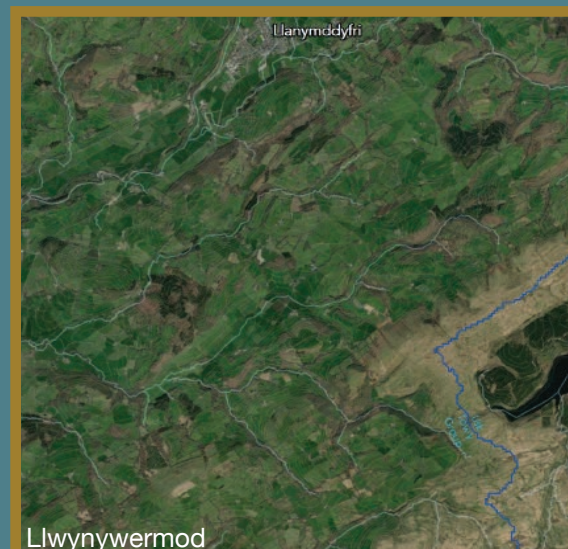
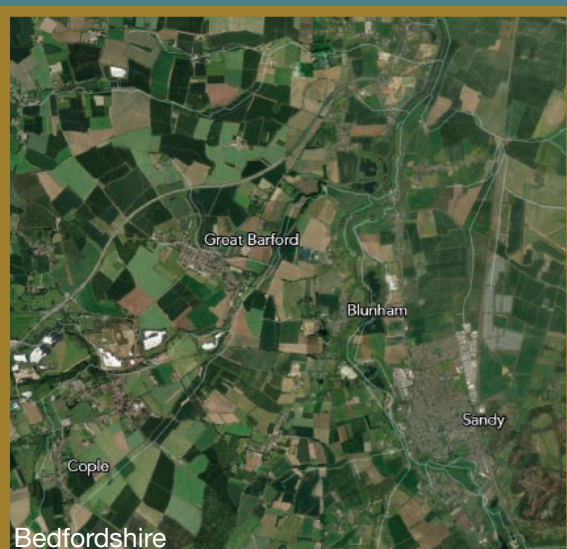


The Isle of Britain will look like this with a 10 m ocean rise and a 3 to 6°C temperature rise. The rise would require half of the Arctic shelf and the whole Greenland shelf to melt.



The Island of Britain endlessly fragmented needs deep reorganization where forests become biodiverse continuous meadowlands regain health with the activity of farming returns biodiversity to the top soils

6 Helen's Town Sites Scattered Across the Island of Britain



Helen's Town: The Beginning

The birth of this work is the hiring of a group of inspired botanical scientists and those from supporting disciplines who begin with making Future Gardens
 The adolescence of this work is when the Future Gardens begin to tell us what can be farmed
 what a forest will be like what herding will be like
 as heat establishes that which will grow and will not grow
 It is a fifty year experiment funded with monies for all until the abundance of the life web itself becomes a complete source of support
 where then an area of countryside within Scotland Wales or the whole island is able to see this small town
 as a benefit to their future Helen's Town can land and grow on any potentially fertile ground
 even the Pennines or the Cairngorms
 it is in this sense that we express the metaphor every place is the story of its own becoming

As Exemplar Three Future Gardens in Process

Sagehen Berkeley Research Station in the High Sierra (2011 – ongoing)



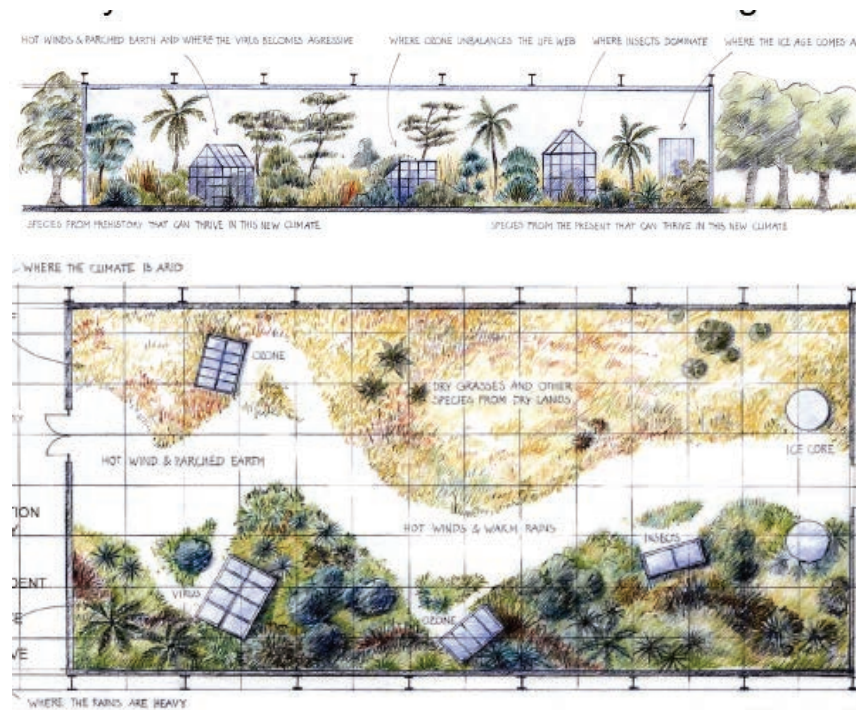
12,500 plantings created for 5 High Sierra sites of different altitudes



Sagehen Future Garden: The High Sierra Site II

The Garden of Hot Winds and Warm Rains, Bonn, Germany (1995 – 1996)

The task we set for this work is the exploration of eco-cultural collaborations that would make for a future no longer based on extraction thus both humid and arid gardens will model the production of food for human consumption while simultaneously creating, enhancing and sustaining a complex interdependent ecosystem. The primary objective being that the harvest will preserve the system rather than deplete it.



Future Garden or the Central Coast of California (2019 – ongoing)

Is it possible to propagate the future ecosystem of a place a future grouping of species that will self complicate and begin the regeneration of species ensembles as the existing ecosystem fades from heat stress therefore rapidly assisting migration that would have taken hundreds even thousands of years of work by the life web to reassert itself in this new envisioning hundreds of years of systems regeneration can be collapsed into decades



Each dome has 16 high resilience species in it. Each dome has the same temperature which is the predicted 3°C above normal. Each dome has a different water regime: one drier, one wetter and one reflecting intermittent rain.

The Future Garden form is democratic, empowering everyday folk to act in the face of climate change. It is a botanical adventure countering extinction while assisting the migration of species through time, rather than space.

Humans and their Habitat as a Niche in the Life Web

While Future Gardens initiate this work, the complexity of the community will need to grow through time. As the biodiversity becomes more complex, so does the human community. We can and must create a complex system, self-renewing in nature, that situates itself in the whole life web community!

This community would perform the regeneration of herding, farming and small village life of perhaps 20,000 people that co-join to become a new niche in the web of life. A niche is the mutually supporting relational position of a species or population in an ecosystem. Often niches large and small have self-generated boundaries.

If we are to survive the coming shocks to our planetary systems, humans and their habitat must become a niche in the life web. These niches will take many forms, developed, defined and refined in relation to all other factors – place, participants, other biodiversity. Helen's Town is one possible way to reharmonize our human lives with the life web.

A Grand Synthesis

The required historic and scientific knowledge is available. The urgent need now is for the generation of solutions at scale where the original research is in the doing. To collectively express a whole systems synthesis as a working niche in the web of life, the elements required include forest (which can become ancient forest in a less than 200-year cycle) combined with ecologically knowledgeable herding, the newest forms of agriculture that are polycultural in nature, and an education system that is informed and involved in generating an eco-cultural, empathic community.

The Sixth Extinction

The present disassociation of human society from both its physical source, the life web, and from empathy for the life web's well-being have, in good part, brought about the sixth extinction. This continuum is a planetary trial by fire, witlessly created by ourselves, reflected within industrial processes, overpopulation, wealth accumulation and extreme extraction of resources. The web of life is well on its way to expelling us humans, as it has previously done to other evolutionary mistakes. Clearly a call for the synthesis at scale that Helen's Town, at maturity, would

express.

Present day capitalism will continue to generate this sixth extinction and the overarching simplification and further degeneration of the web of life. For elements in the life web, where extraction has been most extreme, systems collapse is highly probable, and the outcome is the simplification of the life web. When energy is changed from one form to another there is always a net loss, thermodynamically expressed as entropy.

Entropy

The ecologically based design of this 20,000-person town makes it forageable, carbon positive, and biodiverse. All of the town is fully engaged with the life web during its life and can itself be consumed by the life web after its use is complete. In short, a low-entropy, small town is possible, and this document provides the key concepts for its initial design. By entropy we mean the extraction of resources (energy) from planetary life support systems with no equivalent energy restored. Helen's Town by its very existence in its own small space reverses this process.

Systemic Solutions

Globally, the atmospheric commons is under stress and producing less oxygen while over 13 million square miles of monocultural farming is in the process of degenerating most of the life web in the soil. The world forest is reduced by between 60 and 70 percent, the world ocean is simplifying itself under extreme stress and human population is increasing in ways that are more than equivalent to ecological resources decreasing. Yet this is only the short list.

The problems we face are so profound that solutions must be systemic and grouped to other systems, which suggests a different scale of thought. If not, as fast as we solve problems, the forces of the present marketplace will coopt the solutions, causing new problems.

Abundance

Helen's Town reverses modernist, Cartesian thinking that the world is a machine; an extremely costly belief that insists on problem solving part-by-part. Helen's Town sets out to create a complex system that is

simultaneously abundant for all participants as well as being life web regenerative in all of its operations.

The ecological concept of abundance refers to the natural overproduction of species. Any species in order to survive overproduces, whether it be eggs, trees in a forest, ants in an anthill, the examples are more or less equal to the number of species living. Typically, the overproduction of one species is the food for another. For instance, an ancient forest becomes healthier when its overproduction of trees is harvested appropriately. The same is true of farming and for herding. This overproduction or redundancy is the basic wealth of this complex regenerative community. It is this redundancy that becomes tradable when excess exceeds local need. In the case of Helen's Town, we return to source, where the sun is the engine, waste is impossible, and abundance is everywhere.

Empathy

By cultural empathy we refer to the feelings and diverse expressions of identification that peoples from prehistory to the present have developed when attempting to live non-destructively with millions of companion species over extended periods of time. In its simplest form, empathy is a metaphorical state where for instance a hunter who takes down a deer is in a metaphorical relationship; for that moment the hunter is the deer, although not completely. This is a form of empathy, with the life taken, expressed with gratitude. The making of community within Helen's Town creates a new kind of empathy between those who dwell there, in which their shared habitat and aim for entropy reduction enables a focus on the wellbeing of the whole.

Education

The education system underpins the development of empathy. Within the town is a modest-sized teaching system, the core work of which is evolving in interlocking parts: the ancient forest, syntropic farming and polycultural herding. The systems-based education focuses on enabling biodiversity to inform harvesting in such a way that the system is preserved and can evolve, at the same time as developing and enhancing empathy, through learning by doing. The teaching here is somewhat parallel to scientific experimentation, tuned to art making. This educational platform is self-invented out of the situation of the place itself. There are periodic community meetings concerning the wellbeing of

the place as a whole, structured similar to those of the Quakers.

The creativity of the inhabitants is also abundant. This creativity, this improvisational power, will be put to work designing a community town square or main street and the many other micro-civility structures, often electronic in nature, that make for rich cultural activity along with foraging as part of everyday life. But let us not forget the cathedral-like grandeur that the ancient forests bespeak.

On Forestry

In old growth forest, the act of harvesting can preserve the system, by working with a late succession stage before climax. A novel form of forestry could be ecologically, politically and socially accepted where a wilded 5000-hectare, endangered species forest generates abundance; intentionally designed as a mixed conifer and hardwood forest. The forest product for 150-200 years would be foraging and hunting. With the passage of years, redwood trees, as an example, would reach 150 feet. Then, one might harvest yearly 1/200th of the 5000-hectare – i.e. a 200-hectare annual harvest spread across 5000-hectare of trees matures, to the point where a hectare may have 140 200-year old trees. Therefore 200-hectare would have 28,000 harvestable trees. Building from wood, stone and recyclables gives profound environmental benefit.

This New Ancient forest is a succession forest, assisted to accelerate. Species diversity reaches up to top predators – the hawk, the bear, the wolf, the lynx, the wild boar and us, although differences place by place will vary. The forest also yields fruit, nuts, berries and funghi. The forest offers a modest but diverse harvest every year, of wild garlic and onion, while acting as a home for various chains of predation, with the predation niched into the ecosystem, improving species diversity. Forest foraging tunes to the proposed farming system as an outcome of the developing complexity of the whole environment.

On Farming

If 20,000 people consume three to four pounds of food each per day, that gives a requirement of about 140 million pounds annually. Using syntropic farming, one can expect after ten years or much less for the system to become increasingly productive extremely rapidly. After full maturity we can expect around 60 tons a hectare.

The kind of farming we propose is growing in acceptance. Syntropic farming as designed by Ernst Götsch over many years is now practiced variously around the world. He understands that farming in its present state degenerates topsoil, causes erosion and massive carbon loss and sets up the conditions for compaction, where the earth will no longer hold water. From the life web's perspective, the days of monocultural farming must be over. There are about 12 million square miles of farming on the planet, the majority of which uses artificial fertilizers, pesticides, herbicides and the like. This must cease. Götsch looks to the life web and takes instruction for his farming from succession ecosystems, particularly how each succession over the years enriches the biodiversity of both soil and companion species. Farming can transform itself and the environment, and within ten years or less be as productive by volume, or more so than present agribusiness, with the food produced being more diverse and nutrient dense and the life web respected.

On Herding

By retrieving historic methods of herding, biodiversity can be re-generated on pastoral lands. The initial Future Gardens will inform grass and meadowlands, typically with around 40 species. The herd reinforces biodiversity through the act of stamping seeds in the ground and fertilizing the soil, making it organic, nutrient-dense and of the highest quality; medical treatment is eliminated. Thus over time, any reduction in productivity in herd animals is far outweighed by the gains: the return of biodiversity, the health gained in the topsoil. In fact, the overall cost of bringing the herd to maturity is significantly reduced. The same applies to the companion species - the birdlife, insects, wetlands, small game and the great diversity of plant species.

In temperate environments, a hectare of diverse meadowland can support about one herd animal. So we propose a 2000-hectare pastureland supporting 2000 creatures, with a two to four-year cycle of culling. This is a humane form, although not the only form of animal husbandry, and provides nutrient dense protein for the community, in combination with a plant-based diet. We believe that from the life web's perspective, the more we move into a plant-based diet the more healthy we and the web itself become. As forestry, grasslands for herding and syntropic farming take over, the redundancy we talk about can happen and wealth can come to the community from the life web itself, and to the benefit of the surrounding countryside.

The Town That Reorganizes the Countryside

Helen's Town is conceived in place in such a way that a person can take a long meander through it, being minimally conscious of urban structure and maximally conscious of the workings of nature, particularly from the perspective of urban foraging. The borders of the town intersect with forest, farm and meadow – all designed to be productive and biodiverse. The proposed town becomes a form that is an understandable shape in the larger countryside, having the potential to become a vibrant expression of urban life. The concepts are repeatable, but will differ place by place, in response to differences in climate, topology, biota and the beliefs of the people who live there. The town teaches other emergent green towns how to become novel ecosystems, developing new niches in the life web. If steps like Helen's Town are not consciously taken then the lands will remain fragmented and the forests will remain mostly monocultures. And, with the coming drought and heat, all life changes, extinctions abound, adaptation will insufficient.



And If Ocean Rise is 15 Meters...

Helen's Town designed as a self-making niche expressed as a whole systems synthesis it is an eco-poetic offering to the web of life it proposes a modest act of regeneration an adaptive response to healing a multitude of particular places on the globe Helen's Town is an apology a gesture of respect an act of ecological knowing expressed on the ground Helen's Town is also designed to produce more oxygen than it consumes taking in more nitrogen than it releases altogether a gift to the atmospheric commons yet looking further into heat-shocked future where ice shelves melt ocean rises 15 meters on this island 8 million people become refugees facing 31,000 kilometers covered with water What will this island be like with waters rising 15 meters 6° temperature rise or more with population increasing and land and food supply decreasing what is left but pain and disarray for the peoples and stress for all companion species there Ah! The work to be done the beliefs that need to be abandoned the new beliefs in need of creation the fragmentation of the lands reversed the depopulation on the lands accepted as necessary and the creation of a high productivity zone in the adjacent ocean as a new food supply *in need of saying again again again pay attention to the voice of the topsoil commons pay attention to the voice of the ocean commons pay attention to the voice of the atmospheric commons listen to the voice of the life web become obedient*

