

GREENHOUSE BRITAIN

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SUMMARY

We believe that the cultural landscape is largely formed by the dominant cultures of a place. "It is formed by a sometimes conflicted, sometimes consensual discourse or narrative from an array of stories, observations and intentions, first spoken by people of these dominant cultures and thereafter enacted on the ground. To our view, such a story has certain fluidity about it, and may change directions for any number of reasons. This work, *Greenhouse Britain*, is designed literally to express what the rising of waters would mean to the landscape of the island. It takes the 3 positions of defense, withdrawal and then defense, withdrawal to the high grounds.

We suggest that the existing plans for greenhouse emissions control will be insufficient to keep temperature rise at 2° or less. In fact, we believe that the tipping point is past. In this context, the rising ocean becomes a form determinant. By "form determinant", we mean, the rising ocean will determine many of the new forms that culture, industry and many other elements of civilization will have to take. There is another piece of this picture that we wish to give voice to. That is up until this present rising of the world oceans, the creators of Western civilization have held and enacted the belief that all limitations in the physical world, particularly in the ecological world are there to be used and overcome. We think that the rising ocean is an opportunity for transformation, but it is exactly the reverse of a new frontier to overcome from civilization's perspective. Now, from the ocean's perspective, its boundary is perhaps a continuing, evolving transforming new frontier. Therefore, assuming a rapid rise of waters, even for a modest 5 meters in 100 years, there are apparently no models of precedence, no information, design, nor planning on the table, with the exception of ocean defenses and typical development models, albeit more energy efficient ones. It is the intention of this exhibition to begin generating the thinking, the design, perhaps the new belief structure, perhaps even indicating new economic structures that may be required for the democratic dispersal of support for an upward-moving population within the context of a gradually shrinking landmass.

We as strangers believe that Britain is at the intersection of 3 histories. There is the history of empire, its beginnings, its growth, its high point at the Industrial Revolution and its contraction from the 1930s to the 1970s to its present consensual relationship to so many of its former, now independent, colonies. While, part-by-part, we imagine this contraction can be seen as stressful, seen as a continuum, we as strangers perceive this withdrawal, this re-forming of self, as it were, as graceful. It is in this sense that we believe that deeply imbedded in the zeitgeist of the country is the knowledge or understanding of how to yield terrain.

The second history is imbedded in the astonishing, for us, national response to the threat of invasion by the Nazis. We both remember, as children, the news stories and Churchill's speeches on the radio, which did, in fact, unify and mobilize the country (and to some degree, our country as well). We see a partial metaphor here. We do not see the world oceans as attacking the isle of Britain, but we do see the need for the country to mobilize with the same integrity, vitality, cooperation, depth of purpose and "all-in-it-togetherness" that typified the war years and the reconstruction thereafter. We note that this insight has been recently expressed by others.

The third history that we see is one that this proposed work of art seeks to co-join with. It is the new history that is coming into being in a 30-year to 100-year Now with a growing understanding of the urgency imbedded in this 30-year moment.

SUMARIO

Creemos que el paisaje cultural está en gran parte formado por las culturas dominantes de un lugar. "Está formado por a veces desde el conflicto, a veces desde el discurso del consenso y la narración de una serie de historias, observaciones e intenciones, de las que habla el pueblo de estas culturas dominantes, y posteriormente promulgadas sobre el terreno. A nuestro juicio, esta historia tiene cierta fluidez sobre él, y puede cambiar de dirección por cualquier número de razones. Este trabajo, "Invernadero Bretaña", está diseñado para expresar literalmente lo que el aumento del nivel del agua significaría para el paisaje de la isla. Sugerimos que los planes existentes para el control de las emisiones de efecto invernadero será insuficiente para mantener la temperatura a 2 ° o menos. De hecho, creemos que el punto de inflexión ha pasado. En este contexto, el aumento de los océanos se convierte en una forma determinante. Por "forma determinante", queremos significar que el aumento de los océanos determinará muchas de las nuevas formas que la cultura, la industria y muchos otros elementos de la civilización tendrán que tomar.

Hay otra pieza de esta imagen que queremos manifestar. Hasta que se presente el aumento de los océanos del mundo, los creadores de la civilización occidental han celebrado y promulgado la creencia de que todas las limitaciones en el mundo físico, en particular en el mundo ecológico está allí para ser utilizado y superado. Creemos que el aumento de los océanos es una oportunidad para el cambio, pero es exactamente el reverso de una nueva frontera para superar la perspectiva de la civilización. Ahora, desde la perspectiva del océano, su límite es tal vez una: la evolución de la transformación de una nueva frontera.

Por lo tanto, en el supuesto de un aumento rápido de las aguas, incluso a unos modestos 5 metros en 100 años, según todo indica, no existen modelos precedentes, no hay información, ni diseño, ni planificación con la excepción de los océanos y defensas típicas modelos de desarrollo, aunque energía más eficientes. Es intención de esta exposición comenzar a generar la reflexión, el diseño, tal vez la nueva estructura de creencias, tal vez indicando las nuevas estructuras económicas que puedan ser necesarios para el apoyo democrático de la dispersión de un creciente movimiento de población en el contexto de una gradual disminución de superficie.

Extrañados, creemos que Gran Bretaña está en la intersección de 3 historias. Existe la historia del imperio, sus comienzos, su crecimiento, su punto más alto en la Revolución Industrial y su contracción de la década de 1930 a la década de 1970 a su actual relación consensual a muchos de sus ex, ahora independientes, las colonias. Si bien, parte por parte, nos imaginamos esta contracción considerándola como estresante, visto como un continuum, como extraños que perciben esta retirada, esta re-constitución de sí mismo, por así decirlo, como buena. Es en este sentido que creemos que profundamente incrustada en el espíritu del país está el conocimiento o la comprensión de cómo el avanza el terreno.

La segunda historia está incrustada en la asombrosa, para nosotros, respuesta nacional a la amenaza de invasión por los nazis. Recordar, como los niños, que ambos, las noticias y los discursos de Churchill en la radio, que, de hecho, unificaron y movilizaron el país (y en cierta medida, nuestro país también). Vemos aquí una metáfora parcial. No vemos los océanos del mundo atacando la isla de Gran Bretaña, pero sí vemos la necesidad de que el país pueda movilizar con la misma integridad, vitalidad, cooperación, profundidad de los objetivos y “todo-en-la-unión” que caracterizaron los años de la guerra y la reconstrucción posterior. Tomamos nota de que esta idea ha sido expresada por otros.

La tercera historia que veremos es el proyecto de una obra de arte que tiene por objeto co-unirse con él. Es la nueva historia que acontecerá de 30 a 100 años a partir de ahora con una creciente comprensión de la urgencia incrustada en este momento a 30 años.

1) Lea Valley text

Where it can be seen that it is possible and desirable to abandon a short sighted plan for the benefit of a larger whole (very tentative)

Losing Ground, Gaining Wisdom

For instance
looking at the Lea Valley watershed
more or less at the request
of people at Gunpowder Park
it was not difficult
to go in the minds eye
downriver on the Thames
a bit
and see the Gateway planning
for a multitude of housing
understanding that what might be built
from those plans
would be underwater as the oceans rise
so we began imagining
the upward movement of planning

For instance
Imagine a new form of dispersal of people
money and resources
where
development becomes associated with
the generation of biodiverse habitat
so that the one does not subsume the
other
as is now the case
Imagine that this development
new and ecologically provident
is spread across
the open areas in the Lea Valley
to the north of the Lea River
Imagine that village forms were designed
to live and be
in a forest surround
with a bio-diverse edge
and every village form
became a figure
in a biodiverse forest field
enacting a new paradigm

where contemporary resettlement
restated the benefits
inherent in
an historic form
and the work of the forest
was to sequester carbon
in large amounts
and the work of the forest
was to regenerate the earth
as a carbon sink
and the work of the forest
recreated subsoil ecosystems
and the work of the forest
was to reestablish the earth
as a sponge
thereby enhancing
both the well being of the earth itself
and the water system of London as a
whole

Then the (ask Bignell about numbers)
houses expected to be
built here over the next twenty years
really a (ask Bignell) pound economic
engine

And so you and I
with the help of architects and
designers
began work on two maps at once—
the one which we called the
catastrophe
which gave the power
mostly unmediated
to the market place forces—
and the other
a new form of building and planning
which is based on the development

of that which we call the Eco-Urban Edge
 which becomes the margin
 between the village form
 and the forest field.

2) On the Defence of Bristol

Required is text to be placed on the video image. Text can't be written until more information comes about what the video will be like.

Where it can be seen that each place is unique and each act of defence requires its own envisioning and creativity

Text can only be formed after images come from Bignell, but the text strategy is 8-10 statements that appear in the video at appropriate times.

3) On The Upward Movement of People

A Bio-diversity Ring for the Pennines

TEXT I

On The Upward Movement of People

We are standing at the Liverpool dock
 imagining the waters rising
 first 5, then 10, then 15 meters
 thinking about
 the upward movement of people
 and talking about how that
 might happen gracefully.
 Deciding to
 replace the term "development"
 with the term "settlement."
 For us
 it is a metaphorical flip
 an aide to thinking
 and thereafter to designing
 The differences between
 settlement
 and development.
 They are profound.
 We agree
 that the term "settlement"
 has embedded in it
 the idea of habitat for ourselves
 and of niches
 for other living creatures
 Then you said or I said
 the metaphorical shift
 between development design
 and settlement design
 becomes visible
 at its simplest level

in selecting
 an appropriate site
 and then
 tuning settlement
 to the carrying capacity of the terrain

So we
 with a small group of people began
 looking for a site above Liverpool
 where human habitation
 might be designed
 as an interactive figure
 within a bio-diverse field.
 Our small group discovered
 a place in the Pennines
 with 16 watersheds running from
 the dark peak moorlands
 in the east
 through a topographically diverse
 and ecologically diverse
 landscape
 with sloping hills.
 These moved gently
 towards the lower Mersey basin
 Beginning at perhaps 350 metres and
 ending at perhaps 250 metres.
 Then somebody said
 "I know this place

It's really many places
It has
Blanken bog peatlands.
It has upland moorland and pastureland
with semi-natural woodland
and plantations
including wet and dry meadows
And some urban and rural gardens.
Then
of course
stone wall ecosystems.
Walking in the terrain
finding aquatic ecosystems
and upland streams
riparian habitat
little dew ponds
and lakeside
and streamside ecosystems.”
We measured this terrain
and shaped it.
finding that its boundary included 71

square kilometers and about 4500
people living in Hayfield
or dispersed nearby
This place appeared to us
a quintessentially Pennine place
**And thus
we began a process
of thinking
exploring
and designing
what we came to think of
as a new Pennine configuration
a new form
in the British landscape mosaic**

**(341 words)
(98 lines)
(1.5 minute silent read)**

TEXT 2

Beginning this process
We became for a while
4 groups.
One
thinking about
carbon-sequestration

and a second group
which took on the task
of imagining
an open canopy forest
and meadowland

Then a third group
imagined what a village might look like
Posing the question
“what might they do
that others had not done?”

And a fourth group
began the process of
envisioning this place
as a whole system
that was replicable
around the Pennines.
In fact, a new form
in the British landscape mosaic.

And together

we began a consideration
of what one
might harvest from the land
and how such a harvest
could preserve
the system.
And in the process
we began to imagine
a self-nourishing
self-preserving
system.

Text 3**A Pennine Village**

Which Respects the life
within the earth
upon which it stands

It is known how to build
energy efficient walls in a house
It is known how to build
energy efficient windows
and doors and roofs
and heating systems
and waste-disposal systems.
And by extension
it is known
how to build energy efficient houses
and skyscrapers

It is known
how to draw energy from the sun
but not so efficiently
and energy from the wind
and the ocean waves
but not so efficiently
and heat from the earth.
All of these elements
have been individually acted upon
or are being acted upon
and being improved
and re-improved
or may yet simply be
dreamed artifacts
in people's minds.

However
It is not so well known
or at least
not so thought about in depth
nor acted upon vigorously
how to connect
a house
a street
a village
and a water purification system
to the earth
in such a way
that the flow of waters
below the earth's surface
are uninterrupted.
And it is not known
the distribution of trees
that would be required
to enhance the percolation
of waters
that run from hard surfaces

and enable
the ability of earth
to purify water
in a way that is uninterrupted.
Above all
it is not known
how to create forms
on the earth
that respect the life-web
within the earth itself
and leave it minimally interrupted.
So we have begun
a consideration
but by no means
finished that consideration
about how a Pennine village
might interface
with the Earth
Thus all foundations
of structures
big and small

and all roads and pathways
and all service enterprises
such as
electric
and water purification systems
and waste storage systems
sit on the earth
connect with the earth
and penetrate the earth
in a way
that the waters
that flow through the earth
and eco-systems
that have evolved there
and matured there
may continue to be
felicitous to all.

Text 4

On Carbon

Understanding this Pennine place
to be
71 square km or 7,100 hectare
the power
of the passive sequestration of carbon
here
became obvious.
When the choice was made
to conceive an open-canopy forest
that was 40% forested, 2840 hectare
and 60% meadowland, 4260 hectare.
Since meadows sequester
1 tonne of carbon per year
and forests sequester 2 tonnes per year
This new landscape
would pull
about 10,000 tonnes of carbon
from the air every year.

With about 4,000 people
living here now
and imagining a village
of another 4,000 people coming
and moving upward
understanding
that the domestic carbon footprint
of each person is 3 tonnes per year
then
an open-canopy forest grassland
of the kind we are imagining
could passively sequester
about 45%
of each of the 8,000 person's
carbon footprint.
So some of us
began thinking
about how those living here
might remove and sequester
55% of the carbon they use
so that it could be used no more

Text 5

On The Meadows

Given the terrain
the way in which the sun falls
the watersheds distribute themselves
the forest shapes itself
a great diversity of grasslands
wants to happen
with neutral and wet grasslands
with species-rich pastures
harvested by many birds
the gray partridge
skylark, waders, red shanks
and others
there were hay-meadows
again species-rich attractive
to a rich array of invertebrates
including butterflies
such as
the meadow brown
and the common blue
and there were the heathlands
both wet and dry
with heather
and cross-leaved heath
and research was done
about who might live on the meadows.

And the Welsh Black cattle
were selected
for hardiness, adaptability, longevity
and fertility
And the Highland Scots breed
although ornery
survive well
and like the Welsh Black
reproduce
and live off the land
and eat what other cattle pass by.
And we chose the European Bison
the Wisant
which, as the others,
also lives well off the land
liking open areas within forests
the red deer would come
and the mountain hare would come
as would those who hunt them
and assuming
that the total area
of 70 square km
could handle about 1200 head
in 3 different herds
the question of management emerged
with simple ideas

“the harvest will preserve the system”
 “the different herd cultures
 will be respected”
 made clear a management system
 needs to be invented
 more from hunter/gatherer behaviours
 than mono-cultural behaviours
 that is to say
 we imagine this system to become
 a place
 where species are dispersed
 and harvested throughout
 wherein transaction between the parts

is precisely the opposite
 of the mono-cultural productivity
 that dominates
 almost all behaviour
 where food production is concerned
 and where land management
 as a whole
 is concerned
 and wondered
 if such a bold experiment
 might be an almost natural outcome
 in response to
 the rising of waters

Text 6

On The Forests

so others of us
 began to think about
 what this open-canopy forest
 could in fact become
 it is a place where
 fragments of old secession
 upland Oak, Ashwood
 and wet woodland
 mainly Alder
 Cottonwood and Willow
 and ancient plantations
 mainly
 scots pine, norwegian spruce
 and the odd broadleaf plantation
 of beech
 and sycamore
 and our thinking centred
 around harvesting
 with apples, pears
 plum and cherry trees

planted at the boundaries
 and gooseberries and redberries
 especially in the gaps
 between oaklands
 again with the idea
 that time
 was a form-determinant
 with yearly harvests
 of fruits
 hundred-year harvests
 of softwoods
 and several hundred-year harvests
 of hardwoods
 always harvesting
 with the idea that
 the act of harvesting
 itself
 became a contributor
 to bio-diversity of the whole

Text 7

On the Pennine Ring

Finally
 thinking about big numbers
 finding that the Pennine Ring
 had the lowest population
 and the greatest open space
 on the island
 we began to think about it
 as a whole place

with a length of 215 km
 with the area
 of the High Pennines
 over 300 metres
 equaling 4,820 km
 and the area
 of a 5 km downward perimeter
 equaling 5,660 square km

so we did the obvious
and imagined repeating our model
around this ring
80 times
with theme and variations
adding 4,000 people
on this 3,660 square km
each 70 square km shape
and so we discovered
that 320,000 newpeople
might live
and to some extent work
in a harmonious
park-like
savannah-like
bio-diverse
food-producing
open-canopy forest
which by its very nature

dramatically reduced
the carbon footprint of all
and everybody living there
then thinking
about still bigger numbers
as the oceans rise 5 metres
about 2.2 million people
will be displaced
and 10,000 square km of land
covered
and in this circumstance
this Pennine Ring
becomes an invitation to
15% of these people displaced
to move into
a new world
a world that is marvelous

4) the Model

Text in the first minute as the map takes its form on the model

It is an island
covering about 243000 sq km
and about 60,400,000 people live there
It has about 3600 running km of motorways
and a little over 17,000 km of railway
and the farmed lands cover about 4,340,000
hectares
while about 12,850,000 hectares are in
pasturage
66 places are officially designated as cities
while the small towns and villages number
about _____
universities number about 169
and jails number about 175
and there are only 388 hospital beds per
100,000 people
There are _____ miles of river
There are _____ libraries
The many thousands of years of its complex
history
speaks in the many languages of
diverse cultures
and myths

HH
And for this island
which is a much-loved place
NH
The news is not good
and is getting worse
HH

For instance
the Greenland Ice Shelf
is breaking up
much more rapidly
than anyone thought
and this alone can cause an ocean rise
of up to 7 metres in 300 years or less

On the model

The first two metre rise happens

*and a storm surge happens following it
slowly, taking the same time as⇒
as the storm surge is happening
the voices say*

NH

Will it be enough

HH

as the most extreme model suggests
to halt the juggernaut of the ocean
if carbon use is stopped
almost all at once
almost all over
in the next 10 years

*The waters rise to the 4 metre mark
on the model
then the 4 metre surge*

NH

*The news is not good
and it's getting worse*

HH

animals are on the run
plants are migrating
if the temperatures on the average
rise 2 degrees
If this,
then
one scenario predicts
Europe, Asia, America and the Amazon
will lose 30% of their forests

NH

Will it be enough
to slow this temperature rise
HH
if the CO2
from all the coal burning plants
presently existing
and the hundreds of new ones
that China will build
were to be captured and sequestered
Other models suggest
there is a 20 year window to do this

*The ocean rises to the 6 metre mark
The ocean surge happens
The fade-in takes the same time as
NH/HH reading*

NH

*The news is not good
and it's getting worse*

HH

botanists studying the Western Siberian
permafrost
have seen once frozen peat bogs
in Siberia
bigger than France and Germany
combined

begin to boil furiously
as methane bubbles to the surface
they thought this to be 100,000 tonnes
a day
which means a warming
greater than that caused by
America's production of CO2

NH
will it be enough

to construct
a global consensus
to withdraw from the carbon world
entirely?
British Voice
Some models say
we have a 30-50 year window to do so

NH
would it be enough?
HH
to begin now
a transglobal discourse in which
the Global Domestic Output
is discussed
agreeing all efforts be directed to commit
1% of the Global Domestic Product
to the reduction of the carbon surge
to near zero
in order to reduce
the ocean rise?

NH
after all

NH
However
some models predict
an ocean rise of only 1 metre
or less
in a hundred years
which
by all accounts
is manageable
Despite this
*The news is not good
and it's getting worse*
HH
after all
the historic record
indicates that
when the CO2 level raised about 15%
which appears almost inevitable today
and when the global temperature
was at least two degrees warmer
than today
the sea level
was 5 metres higher
However with a 5 degree rise
in temperature
the sea level

was 25 metres higher!!

NH
if some of the modeling is correct
and the sea level rises slowly
massive ice sheets will be

softened and weakened over time
 Intuition suggests
 this will take centuries
 but one historical record shows
 that when ice sheets began to collapse
 the waters rose
 about a metre every 20 years
 for centuries

HH

would it be enough
 to declare world peace
 even to enforce world peace
 so that all the monies now spent

that operate in the forests
 and the oceans
 while leaving
 ancient carbon stored
 as coal and oil
 in their present inactive states

***As the final text is read
 the oceans withdraw to the
 4 metre mark***

and in this state of indeterminacy
 in this state of knowing and not knowing

in warlike behaviour
 would be directed toward
 de-carbonizing the world as a whole
 There may be time enough
 as a few models suggest
 there could be
 less than a metre rise
 per century

NH

*The news is not good
 and it's getting worse*

HH

the world ocean
 as a place that absorbs carbon
 is suffering from feedback
 as more carbon dissolves in seawater
 and forms carbonic acid
 so that
 the acidity of the ocean increases
 at a rate that is 100 times faster
 than any time in the past million years
 and when the ocean becomes so saturated
 it can no longer absorb CO₂
 in meaningful amounts
 the outcomes are, biologically, not fortunate

NH

would it be enough
 to transcend economic thinking
 and begin creating
 a domain
 of ecological thinking
 that regenerates
 the great carbon-sequestering
 world systems

from one perspective
nothing is enough
from another
anything might be enough
so yes
it would be enough
to construct
an ecologically framed
global consensus
to withdraw
from the carbon world
by all means possible

yes
it would be enough
to enable world peace
so that military monies
might be redirected
toward de-carbonizing
the world

yes
it would be enough
if CO2 were to be captured
or sequestered from
all the present coal-burning plants
and those that will be built

yes
it would be enough
if 1% of the Global Domestic Product
were dedicated
to zeroing out
the carbon surge
as an answer to
ocean rise

After all
the rising of oceans
has also been
in good part
the outcome of everybody's work
Thus there is
an odd type of rhyming
between the collective output
of society
and the sequestering of
a small percentage
of its yearly product
to act as the feedback
to society's response
to the rising of the oceans
and the responses
of all systems

to the changes
that are upon us
and all remedies
all together
known and to be known
enacted
would be enough

NH
Finally understanding
that the news
is neither good nor bad
it is simply that great differences are
upon us
that great changes are upon us as a
culture
and great changes are
upon all planetary life systems
and the news is about how we meet
these changes
and are transformed by them
or
in turn
transform them

British Voice

The waters rise twelve metres
the storm surge expresses itself
on the ground
at fourteen metres
(the voice continues)
the waters rise twelve metres
the storm surge expresses itself
on the ground
at fourteen metres
(the voice says)
are we looking into
a thousand year future
far beyond our capability
to rethink present systems
of governance and production?

British Voice

Looking at the eight metre rise

at least 5,200,000 people
would be displaced
and 26,200 km of land
would be under the sea

The ocean rises to 8m
then surges
the surge withdraws
the ocean rises to 10m
the water surges
on the model

HH

Looking at the six meter rise
looking at
the shape of the storm surge
it does not seem
that so much can be protected
while the economic urgency
appears outrageous

looking at
the shape of the storm surge
Wondering
if this event would be
so many years in the future
that planning and thinking
and acting in the now
against such an eventuality
was impossible

Looking at the ten metre rise
looking at the shape of the
storm surge
Wondering the same thing
Although
at a 10 metre rise

British Voice

if
the yearly gross domestic product
is 2.3 trillion dollars
(CIA estimates)
and
1 percent
of this domestic production
would be 23 billion dollars
then
after 20 years,
about 460 billion dollars
could be sequestered
Which would be sufficient to support
the first upward movement of people
and the upward movement of
infrastructure
and then
for every 20 years thereafter
another movement of people
upward
could occur

British voice

Looking at the four meter rise
Looking at
the shape of the storm surge
we examined
what a 5 metre ocean rise
might mean
and we were looking at
about a 10,000 square km loss
of land

with about 2,200,000 people
displaced
And somebody said

“Where will the money
to help fix all of this come from?”
“What new forms
of organization do we need?”

***The storm surge does not change while
reading***

A British Voice says

Looking at the first two meter rise
looking at the storm surge
thinking about protection
thinking about where monies
might come from
to protect (the land)

Map image begins with rivers, then towns,
then topography then roads and other
infrastructure. This takes about 45 seconds,
the length of time to read the text.

British Voice

Looking at the sixteen meter rise
Looking at the lands covered by the
storm surges
we did a study
that indicated
31,200 km of land
would be covered by water
displacing almost
8,000,000 people
who would be
needing to move upward
if the waters rose to
15 metres
not even considering
the storm surge