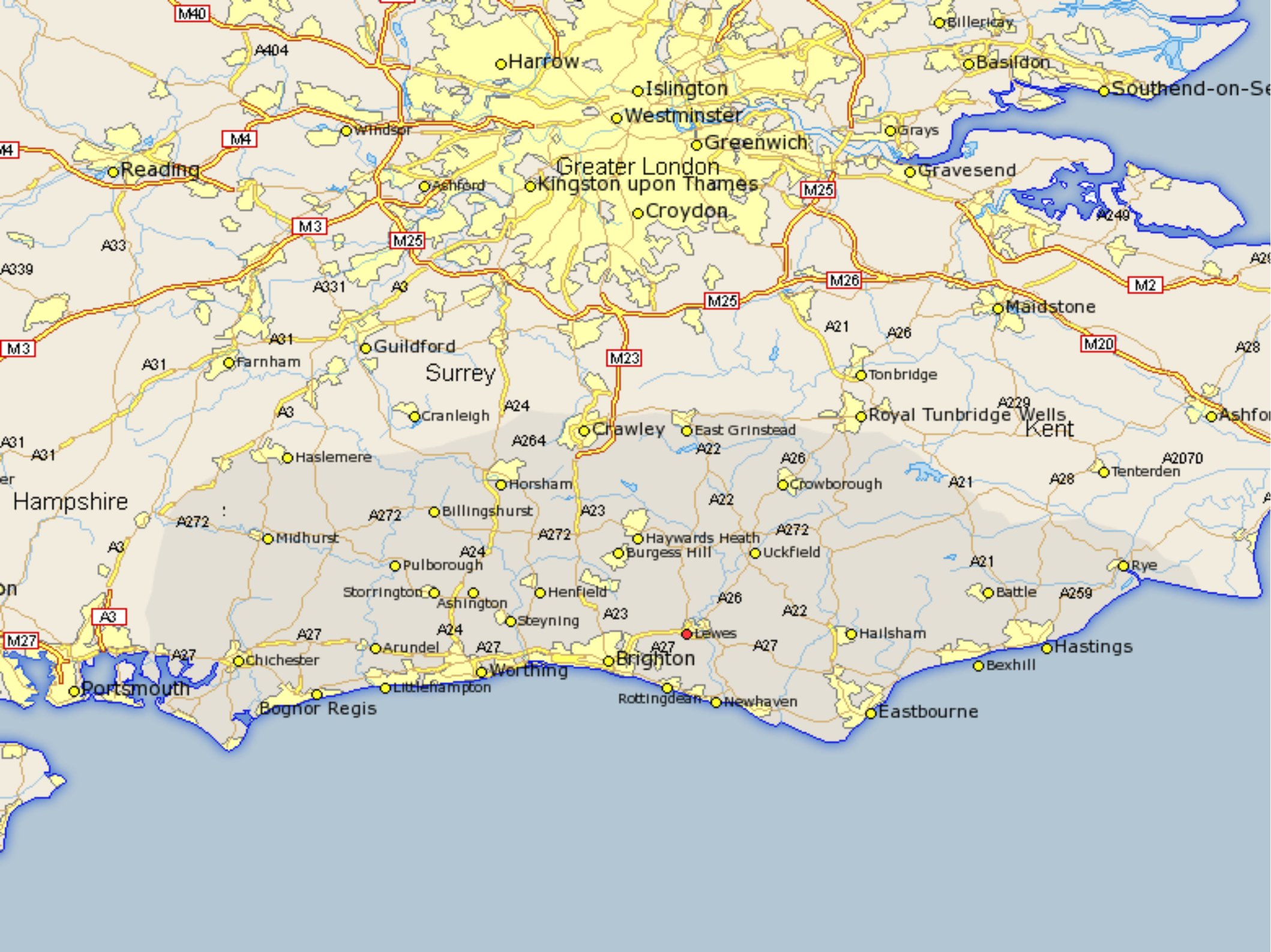
About Us

MakingLewes aims to highlight the leading edges of sustainable architecture and design and the Lewes culture of making. It is run as a community venture.

Make Lewes Festival

MakingLewes is co-ordinating a series of events in mid-September. The events will provide inspiring examples from the worlds of architecture, urban design, and sustainability, whilst simultaneously drawing attention to the burgeoning creative community of artists, makers, and craftspeople occupying space throughout Lewes and the surrounding areas.

www.makinglewes.org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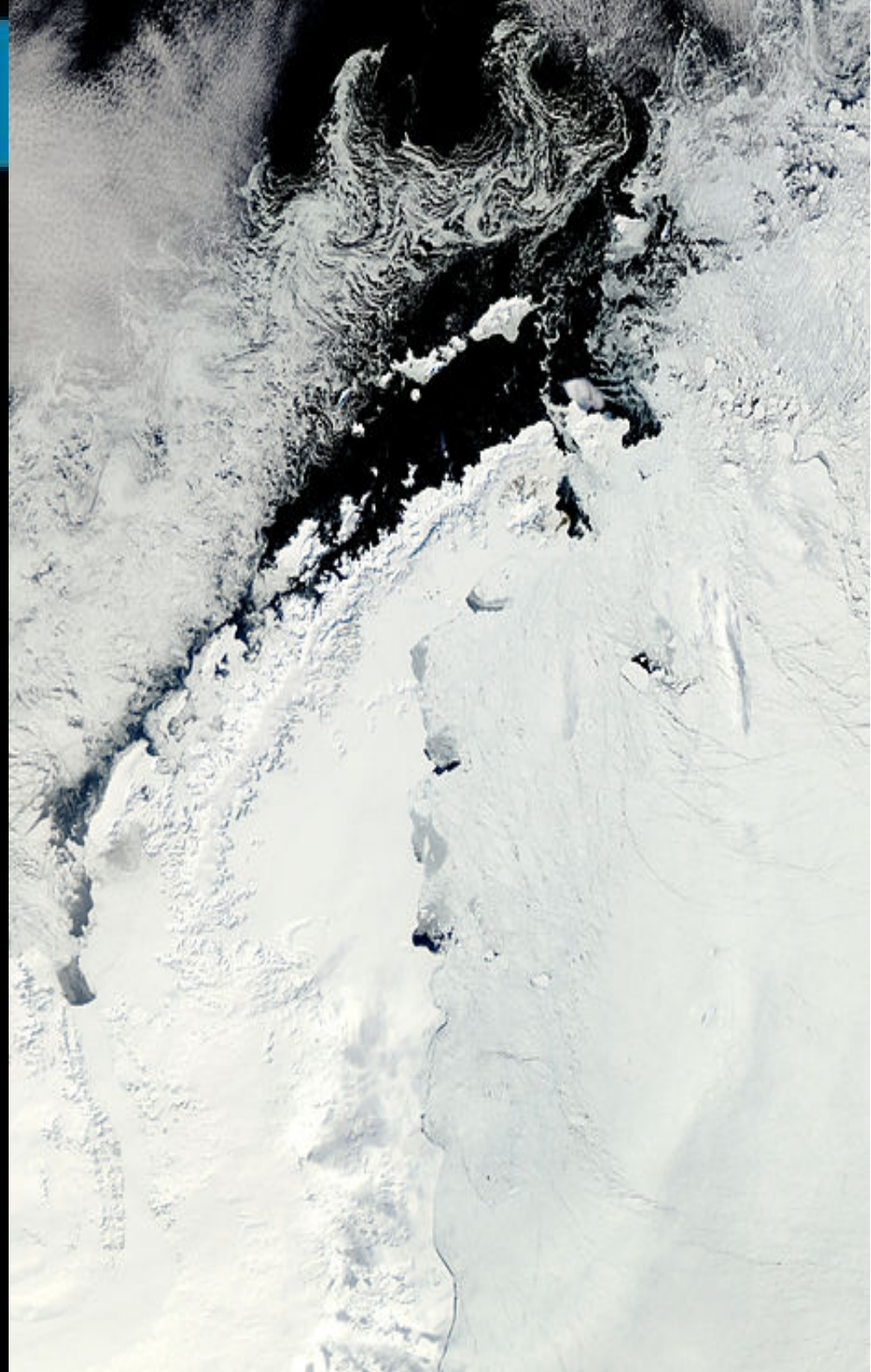

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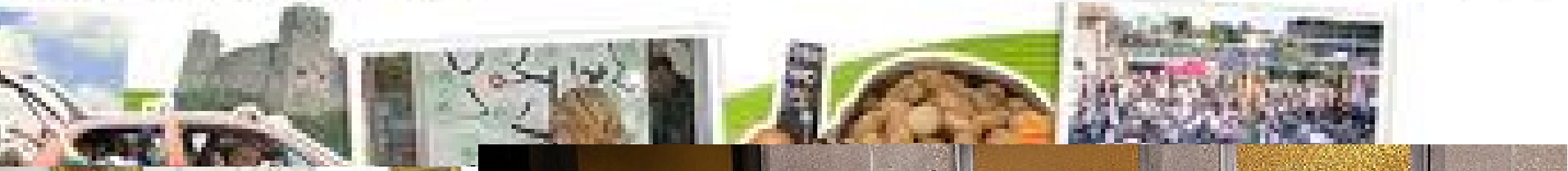

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shopping just got more complicated. The idea that only roduce is good is under attack. There is growing evidenc gest that some air-freighted food is greener than food ed in the UK. Robin McKie and Caroline Davies report c e concept of food miles became oversimplified - and is ing the planet in the process

cKie
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eans that have been flown in from Kenya. Photograph: Wendy Stone/Corbis

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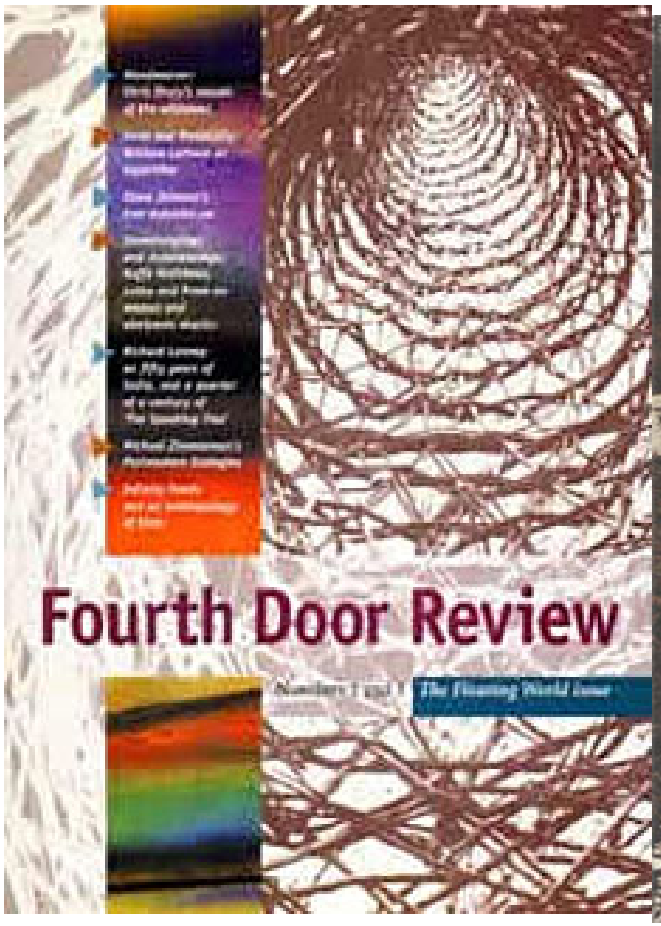
Fourth Door Review


Fourth Door Review
Number 6 The Lanternsure Issue
Andy Goldsworthy: Multimedia, chalk boulders and paths by moonlight
A timberbuild future for Europe
A bluer kind of brown: Jon Hassell, Sheila Chandra and digitally enhanced gamelan
Artstation's paperweight delight
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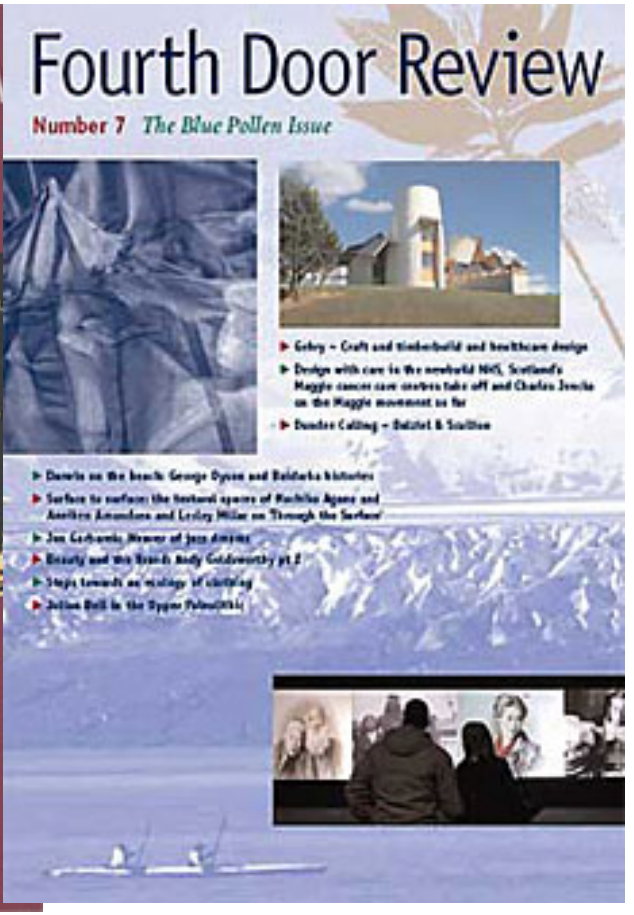

Fourth Door Review
Number 7 The Blue Pollen Issue

Darwin on the Beach

From a teenager, **George Dyson** was drawn to Canada's west coast, to its wildness and to its water. This brought him to a life of designing and building baidarkas – the elegant Bering Sea Aleutian island's ancient skinboat forerunner of the kayak – out of space-age aluminum and pulp-mill fabric, bringing the Aleutian's design perfection to a wider North American audience. Then in the nineties a new wildness beckoned, the digital frontier, as Dyson wrote a definitive book on the emergence of the computer age, *Darwin Among the Machines*. In encompassing each, Dyson has found a path which resolves the embodied craft of ancient futures and the disembodied virtualities of the wild digital horizon.

From under European skies the North Pacific's Bering Sea is almost unimaginably remote. It extends from the western-most reaches of what today is USA's richest state, Alaska, to the eastern-most edge of Asia, the Siberian coast. Necklaced across this northerly circumpolar sea is a linear archipelago of tiny islands known as the Aleutians. They stretch over 1500 miles of water, each island 50 or 60 miles apart. On these islands small communities of indigenous people, the Aleuts, have made their home for thousands of years, probably it was the first stop on the great migration from Siberia that resulted in the prehistoric populating of the Americas. Up until the eighteenth century no European knew anything of the Aleuts, until in 1741 the Danish explorer Vitus Bering, in the service of the Russian crown, was astonished to find approaching their boat not only 'natives' but natives in two extraordinary boats:

'two fathoms long, two feet high, and two feet wide … the frame is of sticks fastened together at both ends and spread apart from the crosspieces inside. On the outside this frame is covered with skin … When the American has sat down in his boat and stretched out his legs … he draws this hem together around his body and fastens it with the bowknot in order to prevent any water from getting in … The American puts his right hand into the hole of the boat and, holding the paddle in the other hand, carries it thus because of its lightness on to the land anywhere he wants to and back from the land into the water … With (the paddle) he … propels his boat with great adroitness even among large waves.'[7]

What Bering and his crew were staring at were examples of the circumpolar tradition for sea lion skin boats, which had grown up on the Aleutian Islands and been refined over millennia into one of the closest fits between form and function known in the boat world. For Bering and the Russian colonists who came after him the boats proved a puzzle. Where did these strange objects come from? Why here in the Aleutians? How did a design of such seaworthy brilliance come to be?

The puzzle is such that different observers over the years have pointed to the Aleuts as being a species apart. They were, wrote one, 'an integral part of the boat'. Bering wasn't quite the first to encounter a baidarka though, one of his colleagues had seen these 'leather boats' nine years earlier. Although the Russian word 'baidarka' stuck, the name which has come down to us is Kayak, a word of Greenlandic origin. What Bering wasn't to know was that they were looking at the ancestral form of the kayak boating design which, two hundred and fifty years later, was destined to take over the world of small boats.

'I think,' says George Dyson, the baidarka builder who almost single-handedly has put the Aleutians on the West's boat map, 'it is very clear why the Aleutians were so fertile. You have this chain of islands that are close enough together so you can get from one to the other. It's like God created the Aleutians to evolve kayaks. If they are too far apart it's extremely difficult. If you put people on a big island like Australia they don't need boats, and the culture tends to degenerate. Culture flowers when you have competing cultures. I mean, you don't just have Venice; you have Venice and Florence viciously competing whilst cross-fertilising with each other. That's what happened with the Aleutians. All these people had to have kayaks. And they would occasionally go to war against their neighbour and occasionally intermarry. So society was really based on having better kayaks. The islands had big gaps, fifty or sixty miles. So you had to have a very good boat to get to the next place. The other important thing is that these islands comprise a linear shape, all having the same climate, with everything the same, and so you could get this very intense breeding ground of culture.'

Dyson, a youthful and fit-looking, fifty-two year old, has been involved in baidarka culture for several decades, long before the craze for consumer-kayaking swept both America and other parts of the Modern World, from Australia through to Europe. To some considerable extent, agrees Chris Cunningham, editor of *Sea Kayaker* magazine, Dyson was instrumental in creating the wave of interest, as well as riding it. If that wave was partial spawning ground for kayak culture, there is also a small coterie of baidarka luminaries intent on maintaining the authenticity and integrity of the baidarka. Today, Cunningham and Dyson are in accord about the fact that skin boats comprise up to only 10% of all kayaks built. Cunningham refers to the North American affection for skin boats as one which has not always sufficiently recognised where the design came from. 'For better or worse kayaking is akin to mountain biking, in that it completely ignores the more serious implications of going on water.' By contrast he is fulsome in his praise of Dyson, for always giving the credit that is the Aleutians' right. Dyson himself acknowledges this. 'People are thankful to me for making it clear that they invented this kayak, which was a triumph of intellectual achievement. So much of the emphasis was on how "isn't it amazing that this thing floated", and I say, "This is really sophisticated, it wasn't an accident". It was very smart people thinking clearly about the problem.'

Today he lives in the small fishing town of Bellingham, near Seattle in Washington state, tucked up beside the Canadian border. Over the course of the last fifteen years he has developed a small baidarka boat-building business, his designs being an evolving adaptation on a form, which he is certain is itself the creature of evolutionary processes. The last twelve of those years have been at his workshop, a converted

Indian oceans of sound – Raga South is North: Jon Hassell's raga in electric blue

The name Jon Hassell is synonymous with Fourth World, the other-worldly, technicolour musical collages the man's been creating since the late seventies. This in-depth interview essay explores the sources, ecological and technological connections and possible futures explicit in Hassell's music, dream theory and ongoing book project, 'The North and South of You'

I

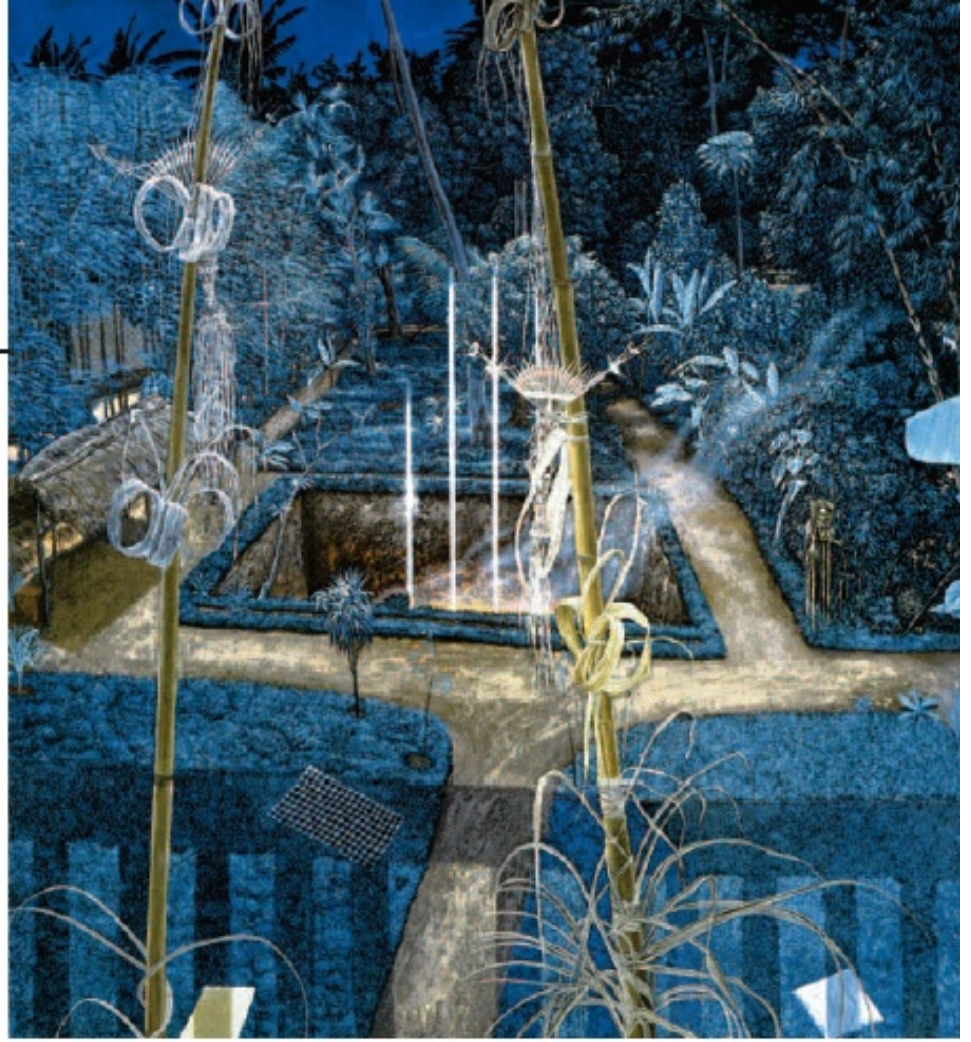
When the first Womad Festival occurred around the summer of 1982, showcasing a dazzling diversity of musicians brought in from around the world, it felt novel and, as it turned out, ahead of its time. Although a large audience manifestly failed to turn up, bringing on sudden bankruptcy for Womad – only saved by Peter Gabriel reforming Genesis for a one-off reunion – the line-up was top-heavy with Western musicians who, along with writers and the independent end of the music business, had been pushing this internationalisation of music for several years. Alongside Gabriel were The Police's drummer Stewart Copeland, a reincarnated Robert Fripp, The Beat, and Don Cherry, Colin Walcott and Naná Vasconcelos, the line-up that constituted the proto world-jazz outfit Codona. Also eagerly awaited and making his debut in the fields of Shepton Mallet that weekend was the avant-trumpeter, Jon Hassell.

Hassell was already a cult figure in Britain brought to the post-blank generations' attention by his collaboration with Brian Eno. In 1980 they had released *Possible Music*. It was Hassell's record but Eno's name headed the cover and Eno took up the promotional tour of duty, talking up Africa as the future of the next hundred years at every opportunity. Alongside the main title was the phrase and promise, *Fourth World Volume 1*. By the time of Womad two summers on, another release had slipped into the world: *Dream Theory In Malaya*, described as volume two in the Fourth World series. And the next summer a third, *Magic Realism* (though without any volume control) completed what for many was a truly inspirational trilogy of records. Before this there had already been a lead up to this triad. In the mid-seventies Hassell released his first record, *Vernal Equinox*, a mellow first step into Fourth World, trumpet raga lines mixed with minimalist electronics, followed in 1977 by the jazz-rock inflected *Earthquake Island*. All these records, in Hassell's words on *Magic Realism*, proposed a 'contemporary coffee-coloured classical music'. Recently in an attempt to deflect his work from being too closely identified within the all-consuming category of world music, Hassell has taken to the working title of 'worldly music'. All three of the records highlighted the beautiful phased trumpet playing, a glissando effect he had already cultivated for over half a decade, since journeying to the east, and arriving at the feet of the renowned Indian vocalist, Pandit Pran Nath, keeper of the flame of the Kirana Gharuna or school. No stranger to technological adaptation, he has repeatedly used a series of devices to multi-track the trumpet so he can play against and alongside himself, techniques that both anticipate and have become a commonplace since the emergence of computers in music.

As rhythmic and textural backing to the trumpet, Hassell built spectacularly intricate soundworlds, intimately reminiscent of musics from any number of gone worlds: Moroccan Mahgreb and the whirling dustworld of the north African desert; the lush swamp-like verdencies of the Indonesian tropics; or the bare heat-ridden plains of north India. In instrumentation these promiscuously mixed both hi-tech futurism and lo-tech ancient tradition, bowl-gongs and the studio as instrument, loops upon loops. The music resembles, yet is never formally connected with, any specific tradition, although Hassell can claim many years of familiarity with the Indian classical raga and drone tradition contained within the bones of this possible music's body. Hassell made this space *sans* any specific place, a key into his fourth world. Within the music fraternity Hassell is seen as a founding father of early ambient, turning up the heat on many a chill-out compilation.

Twenty years on from the Womad debut on UK shores, and Hassell is once again in Britain, this time to perform with Baaba Maal and Howie B at a special *Only Connect* evening in London's concrete art cavern, The Barbican. The evenings music is, Hassell says himself, ninety percent his, put together in four days 'wall to wall' rehearsals in the run-up to the concert. Much of the evening is a return journey through Hassell's possible musics; a sample from ADJ floats across the auditorium as the evening sets in. But what is different is Maal, a vocalist of unworldly power and focus, who sets up a tension within the sound palette, against the sultry and languid instrumentation. 'An experiment,' says Hassell of integrating vocals into the palette. He appears keen to continue this vector in the life story of Fourth World, which on the April evening has reaffirmed the influence and prescience, along with a startling originality, of the early Fourth World albums.

If the ambient cognoscenti know these records well, Fourth World is also part of the musical frame, which has borne influence and imitation, becoming a generic term for identifying related sub-genres. Down the years, while this influence has seeped into the minds of



Alexander's Dream by Mati Klarwein

Cardiff's **Artstation** marries computers, craft and cybernetics to create strange, unworldly paperworks.

Paperweight Lighthouses

AT ITS ENTRANCE, Brighton's Ship Street Holy Trinity Church gives only scant information about what might be inside. Dilapidated outer walls and a few posters hint at its contemporary deconsecrated role: home to Fabrica, the city's leading artspace, with a rolling timetable of innovative cross-media gallery set pieces, installations and, occasionally, exhibits.

Even if you know something of the work that goes on inside Fabrica's building, the first time you step across its arched doorway is something of a revelation. There in the pewless hall is a remarkable space, retaining much of the stillness churches are imbued with. The aged wooden floors, high ceiling and looming empty room amplify the ambience. For the most part the atmosphere is a fine backdrop to the exhibitions that find their way within Fabrica's four walls. Chris Drury built one of his vortex willow-works at the room's centre a couple of years back. Bill Viola's *The Crossing* showed here in 2001, and soon after, the gentle organic curves and waves of Japanese fibre artist, Machiko Agano, wove a web spread the length and breadth of the gallery. For all these, the space was central to the making of the work.

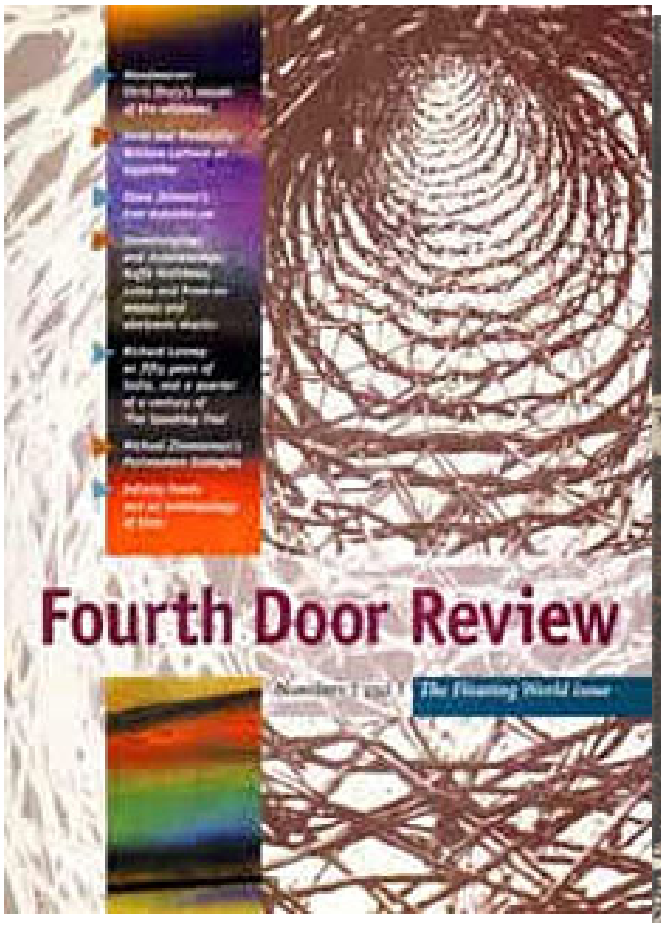
In the order of things, Fabrica's next set piece after Viola and Agano was entitled *Pulp*. It brought in an art partnership whose modus operandi extended this so that buildings and structures became the canvas of their work. Artstation, the Welsh-based duo of Glenn Davidson and Anne Hayes, has for many years been wrapping the interiors of buildings in extraordinary forms, somewhere between giant organic creepers and internal digestive systems, which issue from the ground up, curving round pillars and balustrades, reclining the length of a room and confusing the sense of floorspace as they burst through from one level to the next. In 2000, the two constructed a series of organomorphic bones issuing out of the foyer of the Royal Festival Hall. In Brighton, their contribution saw a partial snail's shell curving out of the font at the end of the Fabrica space into the air. Since Brighton there's been Belfast, and this year work in the low countries, followed by Spain. Strange as the forms appear, arguably even stranger is that they do all this with recycled industrial paper, working out measurements to the millimetre with some of the highest tech hardware around. It's as if craft has met computers and the result turns out to be public space interior design.

At this stage, I am still unsure what to expect – I have had sketchy details of Artstation's creative processes explained to me, but as yet I cannot even imagine what the final installations will look like. Glenn Davidson arrived this afternoon, and spent a couple of hours wandering around the space, getting a feel for the atmosphere… Neil, a student of Virtual Environments at Salford University also arrived with large amounts of technical equipment, all of which will be explained to us tomorrow. I'm left feeling intrigued, and quite excited by the project, whatever it turns out to be.
ELLY PLATT, VOLUNTEER IN BRIGHTON

Artstation was originally formed in 1989 out of the ashes of various other process-led projects in which the couple had already been absorbed for much of eighties. Anne and Glenn had met while at Cardiff College of Art in the late seventies, and as with Artstation, these displayed an immersion in how the process of working in an art context could act as an instrument of communication. This meant a leaning to the educational sphere, a dimension that remains central. The art college experience and the zeitgeist of that early period informs a significant element of what Artstation has become, similar in slant to the avant-art topography traceable back to the sixties, which today forms a central plank of the new art establishment ideological rhetoric, from Tate Modern exhibition policy to the tenets of art college pedagogy. With Artstation, however, there is a feeling this geography has been investigated by them more thoroughly than by many of their peers.

Glenn: 'Most of the works we create owe much to performance art, video art, interactive art and that most elusive, philosophical underpinning/form of art: conceptual art. As art students from the 1970s we were fed a rich diet of conceptual art and the contents of Marxist ideology and also feminism.' They reference Beuys, with whom clear sympathies reside, and specifically his 'social sculpture' thinking and its defining of life as art, as process, a way of becoming that continues to influence subsequent generations. Another related

Finishing touches to the Brighton Fabrica Gallery *Pulp* installation


Fourth Door Review


Fourth Door Review
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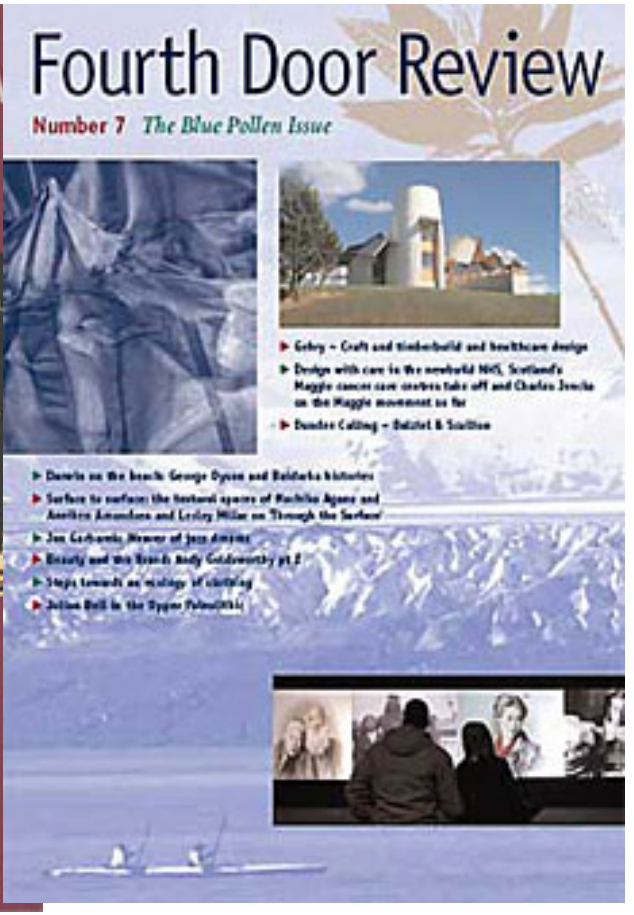

Fourth Door Review
Number 7 The Blue Pollen Issue

Angel Hairs in the Architecture

Imagine our ambient interior design unbedazzled by the ubiquitous electric lightbulb – rather a sensuous interactivity with the qualities of the light of luminosity.

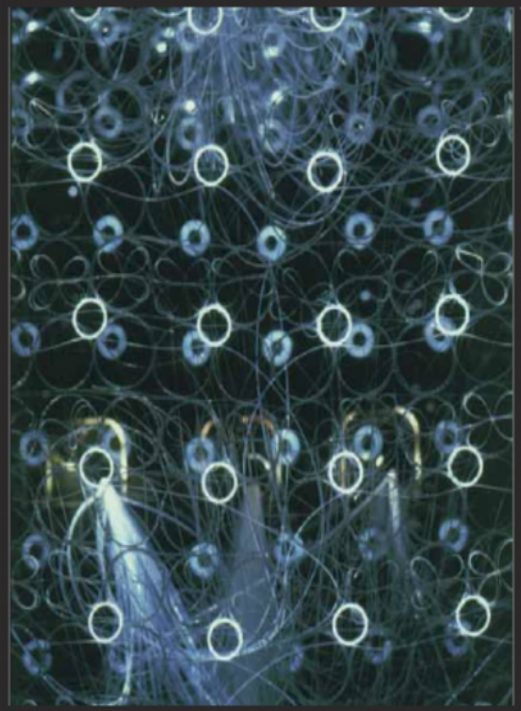


photo Helena Hladova

Once invited to join Captain Beefheart's Magic Band, today Langdon Winner is possibly the only Beefheartian philosopher of technology around. Here he talks about, among other issues, Captain Amerika's state of mind regarding its abiding obsession with the technical imperative.

Having the technology

Langdon Winner, the American Philosopher of Technology, has over the last two decades carved out a unique place in his stated discipline. In his early work, 1977s *Autonomous Technology*, Winner investigated what he calls the logic of runaway or, as the title has it, 'autonomous technology'. Throughout this work his concerns return to the principle of technological limits. In recent years this concern has been expressed by turning his focus towards computerisation, the Science Wars and GM technology.

Winner comes from a perspective of technological pessimism, informed both by Lewis Mumford, and the currently forgotten French sociologist Jacques Ellul, whose overarching view of 'la Technique' was signally influential in the early sixties. Winner was also an early rock writer, with a particular soft spot for eco-dadaist Captain Beefheart. Perhaps his is the closest we will get to a Beefheartian philosophy of technology.

Ellul's book, *La Technique* translated as *The Technological Society* has been viewed as a tour de force in delineating how Western society has become party to the thrall of 'la technique', which he believes organises and orders modern humanity's entire existence. The work is a grim, all embracing dystopian vision of the system and how technological society contains within it a logic of ever-increasing and totalising expansionism. This was, unsurprisingly, influential in activating the green Radical Technology movement in the sixties and seventies. 'La Technique's central concept may be "the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity…advocating the entire remaking of life and tolerating no judgement from without"'.

This theme of autonomous technology, out of control, is developed in Winners work. It, 'follows its own exponential course, independent of human direction…It has fashioned an omnivorous world which obeys its own laws and which has renounced all tradition…Far from being controlled by the desired and rational ends of human beings, technology in a real sense now governs its own course, speed and direction.' Winners prognosis may be gloomy, however it's a scenario which those involved in or advocating the green new media route need also to contemplate. How much can the green movement siphon off the technological developments it likes and feels it can make use of if these are only offcuts from the

The dream-life of tactility

Listen to the eyes of the skin, whispered Juhani Pallasmaa, *in his short but seminal 1996 text. Listen, touch, smell, taste, and feel but don't be taken in by the visual, and our culture of surfaces. Here Pallasmaa, Finland's leading architectural theorist, talks about how he arrived at this sensual world, as his new book,* The Thinking Hand *is published.*

Juhani Pallasmaa greets me at the entrance of his office, a converted second floor apartment in the south of Helsinki. He is a tall man, dressed in regulation architecture black, though immediately warm and with a friendly manner. Bespectacled and bald, with a Finnish glint to his eyes, he ushers me into a book-lined meeting room, where we sit down each side of a long, central table. He says, once initial pleasantries have been dispensed with, that he is writing an article once every two weeks. My knowledge of his work is limited to his polemical essay *The Eyes of the Skin* and an earlier book, *The Language of Wood*, which accompanied an exhibition of the same name, and various of his essays, articles and talks. *The Eyes of the Skin* is a small book, less than sixty pages long, and was published over ten years ago. Yet at the time I read it, and in the years since the book has exerted a fascination and hold on my thinking which I return to for reminders of its essential message.

I am not alone in being swayed by the book's message. This is that architecture, as well as much else in modern culture, has become increasingly experienced through one dominant sense, that of the eye, with the other classical senses, hearing, smell, taste and touch so marginalised as to be irrelevant. Through the sixty pages *The Eyes of the Skin* Pallasmaa made a pliant and persuasive case for just how deeply 'out of touch' modern cultures have become, overwhelmed by the visual and the image, that many no longer even notice. First published in 1994, the book's impact at that time, was such that it became part of standard reading material on many, if certain types, of architectural courses in different countries. That it was steeped in Nordic modernism in theoretical clothing may have limited its reach. In the mid-nineties with much of the architectural community still in theoretical thrall to post-modernism and its texts, Pallasmaa was several removes from the mainstream orthodoxy was never going to be anything like universal. *The Eyes of the Skin* also appeared at just the moment when computer aided architectural design was sweeping through so much of the profession, multiplying the very visual dependency, which the Finnish writer was highlighting as both one-dimensional and destructive. Pallasmaa's argument of deeper architectural purpose, that of strengthening our sense of real experience through the built environment, may also have been too hard, too 'real' even, for a profession which was in turn engaged with practical commercial needs on the one hand, and a tendency towards theoretical abstraction, on the other. To immerse oneself in Pallasmaa's diagnosis, which required the participation of all our senses, rather than the increasingly 'retinal' or 'ocular' architecture of image and spectacle, was not the direction the vast majority of architects with any profile or influence seemed interested in. Even so whilst Pallasmaa's architecture of the senses did not change the architectural map, its influence has made its way, less loudly, through the undercurrents of the architectural world.

Born in 1936, Pallasmaa is these days occasionally spoken of in the same breath as his Finnish architectural peers Alvar Aalto and Reima Pietila. Those who do so, quickly caveat, that this is not to make architectural comparisons, rather to draw attention to similar consistencies of approach and outlook that come from what, arguably, is an earlier and more distinguished era in Finland, when the influence and respect of Nordic modernism was at its height. Pallasmaa is one of the very few contemporary figures who bridges that past with today's very different cultural context, these days being the most influential elder of the Finnish architectural community. As an architect, with a long line of buildings to his practices name, he continues to work energetically on building projects. In 2006 he completed the large Kamppi multiuse development, a mix of shopping centre, bus station and residential right in the heart of the capital. One current project is a museum and concert hall in the northern Finnish part of Lapland. He is well known in his home country, but it is his writings, and in particular his manifesto for an architecture integrating all the senses which has spread his name internationally.

This writing, mostly in the constant flow of essays and lectures, is hardly limited to architecture. The title of one of his most recent books, *The Architecture of Images; Existential Space in Cinema*, reflects the fact that his critique isn't really architectural; he is addressing much broader crucial issues, even if architecture is the primary field for their exploration. 'The hegemony of the eye', is but one of his description's for the over-dominance of this sense, expressed in the omni-dominance of the image in modern industrialised societies. The rise of the retinal is as much a cultural and specifically, technological phenomena, increasing decade-on-decade compared to the place and influence of the other marginalised senses. Our senses are still there, as are our bodies, but we have lost an awareness of this relation, Pallasmaa reminds us through art and other culturally derived examples. In place the full body of the senses has been, and continues to be diminished, chipped away at over the decades by each wave of technological change that adds to the weight of images constantly raining in on us, demanding our attention. One consequence is a loss of some anchorage to the real amidst a mushrooming of the image-world of fantasy. It is not a case of a world without images, Pallasmaa distinguishes between the manipulative and poetic use of the image, the one found in advertising and propaganda, the other with its open, liberating effect. But, with the Internet, with 24/7 global TV, with the power of its reach, the former increasingly drowns out the latter.

Alvar Aalto's Paimio Sanitorium and the Villa Mairea

Pallasmaa explores these issues through art as much as architecture. The contrast he makes between an architecture of image and an architecture of essence, is as applicable to art or to a certain extent, other mediums of creativity. The book on film's title, *The Architecture of Images* is confirmation of this. But he also makes use and draws in psychology and the cognitive studies of both the mind and the body. Beginning with a discussion of the minds relation to the body he will move to introducing its relevance to architecture. For instance, a current interest is the distinction

plexity
edge of land art

r to eco sci-art fusionist, **Chris Drury** has
ular path from the land art thicket. Over the last
rk has turned to exploring the overlay between
our bodies and the sciences of chaos and
led in imaging techniques such as MRI scanning
rom this a remarkable chapter of work has
ury's primarily British based 'Body as landscape'
ney's into Antarctica's ice encrusted and
post-atomic deserts.

all photos Chris Drury

posite) in winter

I The body and the land

Where to for land art? Nine years into the new century and the established wave of British representatives are heading towards the golden sunset years. They are not there yet, but most; David Nash, Richard Long, Peter Randall-Page, Hamish Fulton and Chris Drury are close to theoretical pension drawing ages, with sixtieth birthday celebrations already done and dusted or looming ever closer on the horizon. Such seniority won't stop them working, for sure, but the making of big new steps, after three or four decades plying their art trade, feels, with every turn of another year, less and less likely.

And at the same time the world changes. Indeed the pace of change accelerates. Only eighteen months ago global warming was at last on everyone's lips, today we watch with passive incredulity at economic meltdown. The heat is on. An art form which once appeared radical and refreshingly, rather than shockingly new can in these post-BritArt days, with the likes of Damian Hurst and Tracey Emin settling into middle-age, appear too pastoral and bucolic to the raging, accelerated velocities of the planet spinning out of control. All across the planet news comes in through the instantaneous media and undermines the capacity for pastoral celebration to adequately contend with; the Middle East catastrophe; dark-age Amerika; waking giant China; ice melting across the poles: and changing climate. And finally, so far, the Global economy in irreversible tailspin.

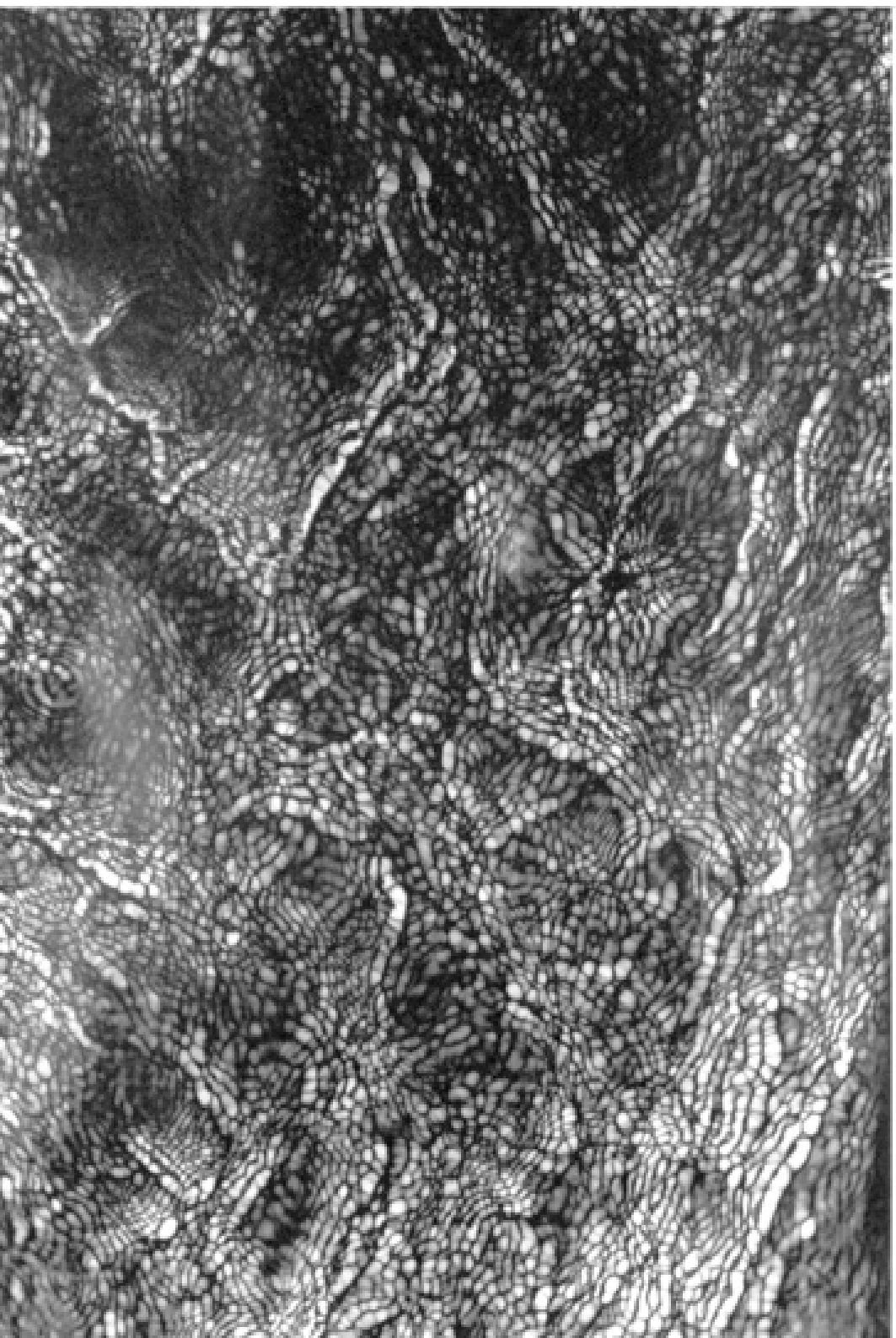
It is difficult to make the link between these headline grabbing, planet-wide themes of our times and the relatively local acts of artists, who highlight the natural world. And yet, artists working close to the natural world do make significant contributions which feel timely, still in these changed times.

Chris Drury, sixty last year, has emerged from a particularly fruitful ten year period, which, through a set of closely related pieces, almost incidentally update and draw land art into a range of contemporary discussions and debates. In each, Drury has uncovered ways to connect to some part of the contemporary world which otherwise would not see itself as necessarily related to the language of land art, nor for that matter the land. Thus, across much of this work, science, in the guise of complexity and chaos theory, informs Drury's exploration of flow and change, overlaying how complexity's patterns are found inside and on the surface of our bodies, in plant life, through habitat and landscape itself to the planetary systems found in the weather and oceans. With complexity science Drury has found scientifically credible means to relay his long-term concerns between a short set of binary pairings, the outer and inner, nature and culture, and the micro and macrocosmic. Through the lens of science he has been able to bind together the inner workings of the body with the outer, external world.

One consequence has been bringing the site specific work in from the beguilingly remote, natural silent spaces to the cold, sterile and alien spaces of hospitals, whilst applying the highest tech machinery of Magnetic Resonance Imaging (MRI) as the instrument to uncovering flow and pattern deep inside our bodies. At the same time he remains an artist involved in the world outside, but his relation to nature has changed. No longer is his work necessarily about exploring the other or is-ness of nature to culture, framed as it was in the orthodoxies of the passive art object viewed by the observer, albeit, outside in the wild, 'more than human', natural world. In place Drury is feeling his way into a more informed ecological art, which inferentially challenges his art peers to a renewed assessment of what this land art work is about, celebrating human experience of its is-ness or dynamically assisting in the work of natures is-ness. Taken together as an ensemble of closely related pieces, the different elements weave in and out, related and relating to each other. Together,

they comprise a new departure for the land art lounge, and one that adds up to significantly more than the sum of its parts.

In Britain the most ambitious and most challenging piece – in terms of managing to get it into the world – is Drury's most fully formed ecological statement thus far. *Heart of Reeds* is a large-scale earthwork sitting in the midst of a nature reserve in Drury's hometown, the southern Sussex British county town, Lewes. *Heart of Reeds* has been something of a personal odyssey for Drury, who conceived of it in 2000 and finally completed and participated in its opening in 2005. A few years on, Drury realises that the work is only beginning; the reed beds are only starting to become visible and it will be three or four years before they have grown fully. The earthworks were dug to make way for a series of connected channels, which from a God's eye view are



Fritjof Capra is the long time mainstay and high visibility representative of an ecologically-hued new age science. From *The Tao of Physics* to the recent *Web of Life*, his popularising books have found a loyal audience beyond the subject-specific enclaves of many of his peers.

Here **Sarah Boas** revisits various issues raised by his books, and looks to where Capra's thinking is going in the future.

Beyond Ecotopia

A conversation with Fritjof Capra

Every two years or so Fritjof Capra makes the journey to Schumacher College to teach a course on 'Ecology, Gaia, and the Systems View of Life'. Schumacher College is nested within Dartington Trust's grounds, in the beautiful, rolling Dart valley countryside of South Devon, a few miles from Totnes. Capra's course can be viewed as part of the College's developing work of establishing a centre for the contemporary study of Holistic science.

In a way this West country stop-off is only part of the latest chapter of the path which has led from worldwide success of *The Tao of Physics* to international emissary advocating an ecological paradigm shift across science and society. *The Tao of Physics* sold over a million copies and has been translated into most of the major spoken languages on the planet. It became a book of its time, a hippie-cum-proto New Age text, appearing in 1975 after the first flush of psychedelia, where a language of alternatives was finding voice, but before the successor zeitgeist of the late seventies and eighties reinterpreted the myth and meaning of its immediate cultural forerunner.

With his follow up work, *The Turning Point*, he focused in on changing paradigms, and his conviction that very significant cultural change was underway in the West and indeed across the planet. Together these two books made Capra a household name across a wide community of people looking for explanatory stories which included their experiences of the last twenty years in its picture. They also sat on pre-New Age bookstore shelves alongside other currently popular titles, *The Dancing of the Wu Li Masters* or *The Aquarian Conspiracy*. What is interesting is how, comparatively, these books have been forgotten, whilst the Capra books, particularly *The Tao of Physics* and the ideas within them continue to exert a fascination for new readers long after their initial publication. That said, there are those who would ask where exactly did this transformation get to. Physics generally, has not exactly welcomed the Tao to its bosom, and its Big Science story is the one which gets all the features these days. And as to Paradigm Shift, is it genuinely credible to view the kind of changes as so deeply taken into the body of contemporary society as to warrant the use of the phrase? Maybe. Maybe not. Maybe only once time is out, fifty or so years hence, and we look at our behaviours and values, will a sense of whether we live in and behave, both individually and in terms of our organisational processes – in more holistic, ecological or maybe just caring ways, will be clear.

And this point – ecological – is key to Capra. He is happier with it as a descriptive term than he is with 'holistic'. This makes biographical sense. His story seems in its beginnings very much the sixties' story. In a way it's the viewpoint of the radicalised science student, who was into Marx, revolution, and also the psychedelic doors of perception which brought him to the great river of the spiritual traditions. And perhaps, who happened to get lucky. In the eighties when he co-wrote *Green Politics* the fusion of this history with the early days of the ecological parties, Capra had seamlessly updated the sixties' spirit within *The Tao of Physics* to fit the political coming of age a significant portion of his generation had found itself at. The next years, spent establishing the ecological educational charity, The Elmwood Trust, deepened this. And his most recent work *The Web of Life* fuses ecological systems' thinking with various other elements of new paradigm thinking in the life and computer sciences. That book has been welcomed by the green, as well as

Fourth Door Review

Number 7 *The Blue Pollen Issue*

- Gehry – Craft and timberbuild and healthcare design
- Design with care in the newbuild NHS, Scotland's Maggie cancer care centres take off and Charles Jencks on the Maggie movement so far
- Dundee Calling – Dalziel & Scullion
- Darwin on the beach: George Dyson and Baidarka histories
- Surface to surface: the textural spaces of Hachiko Agawa and Anniken Amundsen and Lesley Millar on 'Through the Surface'
- Jan Garbarek: Weaver of jazz dreams
- Beauty and the Beach: Andy Goldsworthy pt 2
- Steps towards an ecology of clothing
- Julian Bell in the Upper Palaeolithic

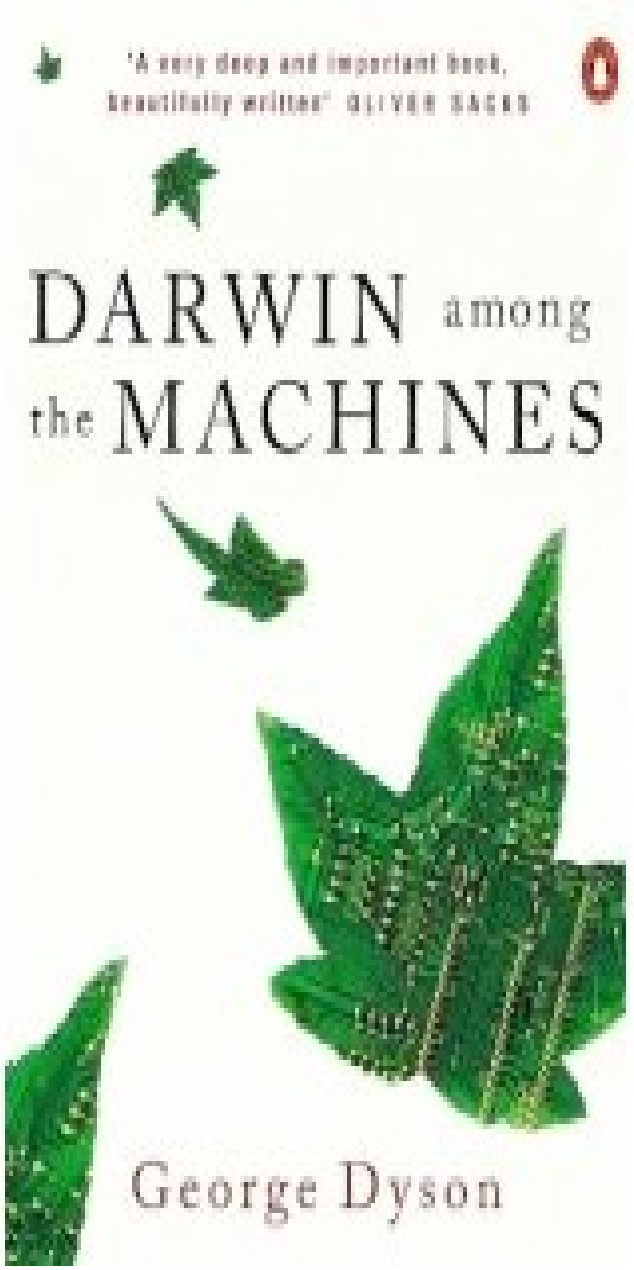
II – Invaders of the sand

is also this other world however, which was ar to Dyson, and which he knew a bit about. thing of the world that had surrounded his ston childhood was out there, the story of the gence of computing. It seems to have begun t out of the blue. One day the New York based nario-publishing agent, John Brockman, rang Brockman had read the short nature-technology by Dyson in the Japanese magazine *Switch*, where n recalled his youthful days, playing in among the trees and remains of the old computer left- gradually rusting away in the backyard barns of rinceton Institute of Advanced Study. Brockman, an ceaselessly promoted a sizeable array of science s in the cause of his Third Culture synthesis, was for Dyson to write a considered, quasi-academic on the history and possible futures of the et. Although there had been quite a few quickly n books thrown out into the reading market there wasn't anything that attempted to look at henomena with both depth and rigour. This for was a fascinating challenge, for despite being d sense of the leading players in the early com- g history, he had neither read, nor knew their his- . Here was an opportunity to revisit a part of the e was, by chance or some variety of design, tan- ly related to. And it was also a way, as he recounts learning about these machines, because at the pot *Darwin Among the Machines*' I did not under- there at all.'

Darwin Among the Machines' preface, Dyson s back to his earliest West Coast times. He writes ming to the deep reverberations of boats as they ed up and down the Inside Passage. He writes, 'As sometimes drifted off to sleep in the forest canopy d wondered whether trees might think, so I sat in gine-room companionway … and wondered ter engines might have souls.' This question h its way through the chapters of the book. If this s romantic and fanciful, the book itself is a care- crafted exploration of the prehistory and emer- of computers, the software running them, and rchitory convergence with evolutionary theory. g quickly into the heady question of whether the l-domain is a new form of life. 'Life's second com- s it is very grandly referred to at one point. Not we know it, and completely different to animate, life as usually understood, but definitely life- nonetheless. The book was written over four between 1993 and 1997, and is recognised as one very few academically coherent examinations of digitalisation may be heading. Yet it begins with, embedded in, history. To get a sense of Dyson's hension of technological evolution along with ionary technology, you need to begin with the debated history of Evolutionary Theory, with Lamark, with Charles Darwin's father, Erasmus, and particularly, in the story Dyson chooses to relate, with Samuel Butler. With Charles Darwin's eighteenth-century adversary Butler standing in the historical foreground, Dyson threads a way between the evolutionary reductionism of orthodox Neo-Darwinism and a belief in a religious Godhead as the source 'from design' for life on this planet. Dyson signs up to symbiosis rather than selection being the key, if still renegade, process of evolutionary change and adaptation. This allows for all sorts of interesting threads of thought to unravel. The broader message of the book is that, along with collective intelligence for humanity emerging via the Internet, and all the other signals of connectivity, this rapidly accelerating electronic environment is showing many signs of emergence, the condition where more complex systems shows traits of intelligence – artificial intelligence – which are not there at the simpler, less complex levels of single computers. In this application of evolutionary behaviour to machines, Dyson presents a detailed history, moving deftly from generation to generation and from century to century, of those who contributed most to the universal machines' progress into existence: engineers, scientists, logicians, mathematicians and philosophers. Starting with an unusual trio of early modern precursors, Butler, Thomas Hobbes and Robert Hooke, the towering early pre-computer figures Wilhelm Leibniz and Charles Babbage, he moves through to the more recent and recognisable scientific giants of the mid-twentieth-century, notably Alan Turing and John von Neumann. His childhood home, the Princeton Institute, looks in and out of view, with reminiscences from the engineers of one of the first computers, the Institute of Advanced Study machine, as it takes shape in the fifties. 'Something about abandoned machines', he writes of these first-hand childhood memories of the Institute in the chapter, 'Rats in the Cathedral', and continues, hinting but not fully saying what that something may be, 'the suspension of life without immediate decay – evokes a mix of fear and hope … We blindly dissected the fossilised traces of electromechanical logic out of which the age of digital computers first took form.' In the preceding chapter, focusing on Von Neumann – an alpha league cold war warrior if ever there was one – a hair-raising weave between atomic bombs and the emergence of computers is followed with cool precision. Von Neumann's research both launched 'the breed of stored program computers that surround us today', and used naturalistic descriptive language – organs, neurons and memory – closer, he notes, 'to biology than engineering'. This world, the close ancestry of today's computing empire, Dyson acknowledges 'bore the paternity of war'. Involving a seemingly mutant symbiosis, he considers computers as intimate associates to atomic bombs, blithely placing the shoe on the other foot: 'Perhaps it was the bombs which were also testing the computers, rather than the other way around.' For Dyson, von Neumann's greatest legacy to computer networking is 'to be found not only in the architecture of individual computers, but in the proliferation of weapons against which networks of computers offered the best hope of defence.'

In chapter after chapter there is a wealth of historical and statistical detail, including, for instance, recounting early in the book the jaw dropping rate of computer growth: that the global population of integrated circuits is 'growing by more than 100 million units per day … [and] production of silicon wafer, approximately 2.5 billion square inches for the year 1994, is expected to double by the year 2000' (did it?) and so on. All this to demonstrate the breath-taking rate of growth of electronic machinery enveloping the planet. But it is as the book approaches its ending, with the history beginning to drop away, that Dyson lays out some of the most dramatic and startling conclusions. All through the book, implicit and near each chapter's surface, are the workings of symbiogenesis, and particularly its originator, Nils Barricelli, who though lesser known, Dyson describes as Samuel Butler's successor. It was Barricelli who saw that processes analogous to evolutionary behaviour, the emergence of digital or numerical symbio-organisms, in effect computer software, could happen in the wink of a micro-second within the universe of a computer, through processes akin to symbiogenesis in first nature, where coalitions of micro-organisms could combine towards greater complexity. Barricelli curiously described these numerical symbio-organisms as 'life-like' rather than actually living, but in the process the threshold between the simply computational and that of artificial biology had been crossed. With the growth of the digital realm into computer-to-computer communication, and from there into the distributed network now known as the World Wide Web these new life-forms have expanded to encompass the whole planet, comprising a global organism, and possibly a global intelligence. And if this is a form of intelligence, as Dyson makes clear he thinks it is, the relation is symbiotic with carbon life. 'In less than forty years, adding one subsystem at a time, we have constructed a widely distributed model that is instructing much of the operation of human society, rather than the other way around.' Such an explanation for artificial life may be unconventional in A-Life circles, but in the last two chapters he ponders the origin of this 'invasion' of these new forms of life and intelligence, these 'sub-vital units – microprocessors'. They come from the sands of earth or, reaching further back from the chemical fusion of silicon and oxygen, the constituent elements of silica. Although these are now proliferating, through accelerated self-reproduction, the coming of silicon-based cyberplasm does not necessarily imply the end of organic carbon-based life. Comparing microelectronic components with those of chemical structures, Dyson points out the former is chemical in process while the latter 'depends largely on relations between electrons'. And it is humans who have acted as servants to this emergence. The silicon-based intelligence relies on communication for their survival and multiplication. Communication is enabled by the realisation that silicon was a semiconductor 'able to act as an electrical switch with electrons as its moving parts.' Through the mid-twentieth-century science fiction writings of Olaf Stapledon, Dyson discusses the living qualities of electrons; that is, how electrons can be interpreted in certain circumstances as possessing 'a mind of their own'. 'An electron within an atom has no distinct individuality', Stapledon stated, 'But the electron may recover its individuality and leap free from the atom, to join perhaps with some other atom and once more die from individuality into a new corporate being.' In both *Last and First Men* and *Star Maker*, Stapledon outlines a distant future where the symbiosis of humanity and machines has long since happened. In *Last and First Men*, Stapledon imagines a war of the worlds scenario two billion years hence, where clouds of Martian micro-organisms, versions of these 'sub-vital units' though individually powerless, 'maintain communication via faint electromagnetic fields … [and] constitute a collective intelligence.' Dyson brings this alien vision down to earth, replacing the Martian Matrix-like extraterrestrial intelligence with his earth-bound silicon intelligence inhabiting an equally distributed Mind: the World Wide Web. To this he adds the caveat that it is extremely early days. 'The World Wide Web, a primitive metabolism nourished by the substance of the Internet, will be succeeded by higher forms of organisation feeding upon the substance of the World Wide Web.'

'If all goes well,' he adds in the final pages of the book, 'our children will be linked ever more closely to the myriad ganglia embedded in their lives, while remaining members of the human race. In the distant future, they may look back on us as children and wonder how, before symbiosis with telepathic machines, it was possible to communicate, or even think.' There follows a half page or so forewarning about what could go wrong, beginning with a quote from the British biologist J.B.S. Haldane, to the effect that evolution has been characterised by a downward, degenerative course. But after two hundred plus pages of dense cool prose telling us about the inevitability of this future, it comes across as almost out of place, particularly as, within paragraphs, he is summoning – again rather oddly – Thoreau's elegiac observation that in maintaining wildness we preserve the world, as witness to the point that we have exchanged literal physical wildness, for that of the endless expanse of the digital wild.



Baidarka stories: The Aleutian Islands origins of the Baidarka boats

The Aleuts are, as George Dyson makes clear, a people of the sea. The Aleutian Island archipelago, which continues across several hundred miles from the western edges of Alaska to Siberia, is the only known source of the kayak or Baidarka, and its larger cousin the baidar or umiak. What distinguishes this part of the circumpolar boat tradition is that the Aleuts created a boat from the immediate resources available: sea lion skin, whalebone and driftwood. No one knows for certain how long the Aleut islanders have been building baidarkas, even if there are a variety of theories. The islands have been inhabited for over eight thousand years, and it is possible that the skin boat design the Aleuts made their own originated elsewhere, perhaps in a land-locked part of the Asian interior, necessitated by an imminent ice age.

What is certain is that the Aleutians developed an unusually elegant, seaworthy and very fast vessel, a version of the kayak that appears repeatedly in different Eskimo cultures throughout the circumpolar North. Its main purpose, apart from transportation, was the hunting of otters, fish, whales, sea lions and other animals, which ensured the Aleuts' survival. The baidarkas were built with single through to triple hatches, while the baidaras were considerably larger open-framed boats covered with walrus skin, used both for long journeys and short ferrying of people and goods. The crucial baidarka material was the sea lion skins, used as a sheath to cover the frame, and artfully sewn onto the frame, usually by women. The frame came from whalebone, was tied using the sea animals' sinew and gut, and waterproofed in seams of blubber. Boats were re-oiled after a week in water, and the skins would be replaced every few years. The versatile skin enabled the speed and waterborne flexibility of the Aleutians. It aided their intimate knowledge of the sea to great effect, and impressed European sailors with their comparatively slow rowing boats.

Next to nothing was known of the baidarkas until the voyages of discovery by explorers like Bering, followed by Russian and British travellers. The history of the colonisation of Alaska, and its cruel exploitation of the Aleut population is evocatively described in 'A Chain of Events', the first chapter of Dyson's *Baidarka* book. The Russians press-ganged the Aleuts into subjugation, and at the same time created baidarka fleets which hunted otters and seals for their pelts. These fleets ventured far down the north-west American coastline, one even reaching San Francisco in 1812. By the time of its outlawing in 1911, these fleets had hunted the otters almost to extinction, which meant the beginning of the end of the need for the baidarka for hunting. As a consequence, the twentieth-century survival of this remarkable boat technology has become increasingly marginalised and tenuous, although something of the building culture remains, along with a small band of supporters such as Dyson, promoting it wherever and whenever they are able. *OL*

Pixel landscapes and grey ecologies

In Conversation – Susan Collins and Sean Cubitt

With her webcam series Glenlandia, Fenlandia, digital artist Susan Collins created the beginnings of a pixelated landscape tradition. Collins talks with new media theorist Sean Cubitt about the digital domain's relation with the natural world through the remote frame of these works

SEAN: The Chinese seem to have come to landscape quite early – certainly by the time of the Northern Song dynasty (960–1127) when the idea of a private retreat from the troubled world, and of landscape as an aid to self-cultivation seem deeply entrenched. By contrast the Europeans seem to have been reluctant to enjoy landscape for itself.

Though there are works like the Tres Riches Heures du Duc de Berry as early as 1412–16, according to the art historian Martin Warnke, the European tradition in landscape is marked by its politics – by allegories and historical associations that invariably overwrite the landscape as such with claims to patriotism, ownership, control or religious belief, a tendency which postcolonial writers also see in the exotic landscapes of early explorers, and ecologists see in wilderness photography. Which if any of these traditions most closely resembles what you are doing with *Fenlandia/Glenlandia*?

SUSAN: If asked where it comes from in terms of what it relates to historically then I do see *Fenlandia* and *Glenlandia* as coming out of a European Landscape tradition. In a sense the work is deliberately trading on convention – or rather the perceived convention – of how a Landscape image might be composed. However instead of historical allegories, the layers embedded and woven into this series are technological.

One layer is that of technology embedded seamlessly into the landscape. With *Fenlandia* the work is

looking out and recording the minute changes i
view over a reclaimed land of sluices, ditches
drains. With *Glenlandia* the view is instead of
Faskally, a manmade loch that services a hydro da
Pitlochry, the water levels in the loch rising and f
according to the demand for electricity.

A second layer is embedded into the construc
of the images themselves: tight horizontal weav
pixels with each second or moment in time – as r
sented by the pixel – moving inexorably forward
timally overwriting the image of the previous day
the broad black band of nighttime interrupting wh
first appears to be a very familiar landscape view. A
ther layer is that of the remote viewer, with the
most often experienced at a distance and mediated
screen – the frame.

Another aspect of the work is that of endur
scrutiny and repetition. The calendar structure o
work does relate to much earlier works such as the
Riches Heures du Duc de Berry or Bruegel's pain
of the seasons, however whilst these works
grounded the customs, labour or agriculture o
time, in Fenlandia/Glenlandia people and animal
depicted by stray pixels, often present but abstracte
the process itself. What becomes visible instea
slight fluctuations and variations in light and m
ment and the enduring, underlying architecture o
landscape itself.

The images are saved at two hourly intervals
ing to a collection of over four thousand arc
images for each location over the course of a
Working on these has for me rekindled a respect
interest in Monet, in particular works such a
haystacks and Houses of Parliament series expl
the effects of time on light and colour, and Cez
whose Mont Saint Victoire landscapes explored
same subject repeatedly but without repetition.

Something that concerns me is the irony in a
of working with technology (as I do) and yet still
ing concerns about the environment and issues o

Sound-sourcing the planetary nervous system

The sub-zero soundscapes of Tromsø's ambient electronica have sparked a wave of interest in this northerly Norwegian city, 200 miles into the Arctic Circle. Biosphere's Geir Jenssen, Norway's nascent new media hubworkers, and veterans from the Tromsø scene, talk about re-fusing soundscapes in the image of their mountain worlds.

Visible beyond the dramatic ridge across the breath-taking fjord inside which Tromsø sits, are the real, equally breath-taking mountains without end: mountains which continue inland for hundreds and hundreds of miles. When you look out at these, and take in their proximity to this small city it begins to make sense that this should be home of one of the oddest geographical upsurges of techno and ambient music, and that it has spawned the so-called sub-zero soundscapes of the Arctic Circle scene.

There's a marketing cliché surrounding the likes of the ambient outfits Acclera Cycle, Circular, Information, (though these latter two are now south Norway based) and the most widely known, Biosphere, and it's this: 'These guys are sitting out in complete darkness, with their fields of snow, working on their computers alone', as Oslo-based Rune Grammofon's, Rune Kristoffersen, unsepulchres it. There's a truth in this, though to get a clearer sense of what this scene is picking up on, you need to move significantly beyond this. You have to begin viewing this scene's emergence, as an electronic reflection of the land, sky, and skyline, in which the musicians find themselves – a far cry from the industrial noise scenarios from which electronica often takes its lead. Mix in alcohol with this, and human scale amidst the endless mountain-scale, and you will begin to understand that this air of Information or Biosphere's *Substrata*. As the guy who runs the Tromsø record label, Beatservice's Vidar Hansen, observes: 'There's both the city and the country, nature here is very close.'

Tromsø, (Troms's island) rests on an islet outcrop of rock, large enough to provide home and hearth for the city's 60,000 population. In winter, by day, the high street, between the recurrent deluges of snow, is brimming with activity. Everyone walks along the snow covered roads. Ski-shops abound, hybridised into hunting emporiums, reindeer-head trophies centre-stage in the window displays. Fur as clothing is accepted here, in the shops at least: animal rights activists would be looked upon with disbelief and curiosity. With post-oil Norway an unusually rich country, the shops are full of expensive items, and the young look hip and well dressed whilst the even younger are pulled to nursery on circular sledges.

PLACE AND MUSIC AND CYBERSPACE

Between silence and the sound of the hyper-glade

New media means new spatialities. This 'margins of music' looks to the changing space of place within the oceans of sound.

Net transmission veterans, Future Sound of London produced their most ambitious ISDN performance for Brighton's Essential Danceday Festival. In doing so FSOL opened new pathways for sound across cyberspace. The repercussions for music, place and cyberspace are myriad.

362 days a year, Stanmer Park is a stretch of beautiful and cultivated parkland on the eastern edges of Brighton. It runs along the thin groove of an inset downland valley towards the major tracery which, at right angles to it, is the east-west valley corridor out of Brighton, and further afield. To the west the valley rises to a higher ridge which threads, in turn, north to Ditchling Beacon. A dramatic and thickly layered woodland sits on this ridge above the valley; the park itself is a soft carpet of smooth and tended grass. Amidst this open land are tall and elegant trees, not many, but enough to give the valley contrast and a sense of texture. Many of the trees are elms, some quite old, and this valley ecosystem, including the adjoining Sussex University campus valley and parts of Brighton, happens to be one of the few parts of the country where the once comparatively popular elm has survived. Climb the full height of the Ditchling ridge, travel into the town a mile or so, and drop into the next valley fold and you are also in another large park, Preston Park this time. Here, along one of its peripheries edges are a line of elms which are amongst the oldest in the country.

You could see the elms of Stanmer Park waving in the wind from inside the Essential Festival site compound. If trees had rights who would ask them whether they wanted a festival in their midst? And who amidst the Festival goers would consider such a question? Surely a few – at least a fair proportion of this throng of young dudes is sensitised and in sympathy with the elements of the natural world. Indeed, how many of these thousands trampling around the site, sitting in front of the main stage, or dancing their heads off in the various dance tents and marquees, have been a part of the new eco-direct action, anti-roads protest and tree-hugging dwellers world of recent years? How many would know people who are involved in such activism, or who feel for the emergent myriad of entangled environmental causes?

So were they in here for the elms, and for an experience of sound and music amidst the open, elemental world? There is something about music in the open, or at least there was – think of the roots of the Glastonbury Festival. But the Essential Festival is a strictly commercial event, and the association between the popular music business and the natural world seems like an idiot's question, not least since much of the support comes from beer firms, the real key to where the money is in such music fests.

Still, Brighton's Essential is a rock festival in the modern mode. Like so many others, this event packed in dozens of performances under half a dozen tents. Along with this were the obligatory stalls – mainly food, drink and rock merchandise. An extra dimension, however, was the novel addition to proceedings of possibly the first ISDN linked performance, to a festival. It was difficult to know how much this was a draw for the audience even if Future Sound of London, long abbreviated to FSOL, have become pretty much exclusively identified with this. As an electronic group, part of what FSOL have become known for has been live radio transmissions from their north London studios, an ISDN link-up between New York's 'The Kitchen' Art Centre and London's ICA. With the Stanmer event this reinvention of performance jumped a further step, a live transmission to a large and ostensibly festival audience, complemented by the parallel screening of visuals as a replacement for the usual focal point consisting of stick people figures of some live band a quarter of a mile away. For many, not least those of a 'keep music live' persuasion, such moves are close to abomination. For others in the telematics and various new media communities it is an obvious step which ought to have been tried and tested across such large scale canvases many moons ago.

It certainly does inaugurate some entirely new kinds of performances which, although remote, also occur in relation with people who are in place-specific locations. It's neither a net web cast or cyber-event as it doesn't occur completely in cyberspace, even as it uses cyberspace as its medium. It remakes the performance's relation with the physical environment. It's being beamed into, rather than relegating the place of performance to being completely incidental. It is also suggestive of how live performances may mutate across various convergent possibilities to completely redraw the festival of the future.

In the meantime there is this, trumpeted as Essential's main event: an ISDN beamed performance arriving out of mediaspace and transmitted to an audience in a single geographical location, chalk downland near the south coast of Britain. What was it like, this life-form? How may it evolve?

On the stage, an ensemble of sixty-four TV-sized screens waits to be unveiled stage-centre. Eight by eight, making for a chess board of screens. Flanking this bizarre centrepiece construction are, on each side, the two all-day screens. Evening approaches, a strange anticipation – people aware that something different, after all the dancing, is about to take place. The screens rehearse various tests, all sixty-four screens with electric blue lines switch off and disappear one by one. Next, and without warning the screens splatter to life – an algae-like mix of colours swirls like careless static onto all three screen sections. All of a sudden a fish-eye fly on the wall lens-picture of one of the Future Sound of London appears in sepia brown. It's momentarily breathtaking. 'London calling', he reports before adding 'two words – Pack Tribal!' This could well be rave politics: roughly the same distance north of London as this is south, the third Tribal Gathering main festival is happening over the same weekend, and is taking place in a park in Luton Hoo, of all places. Gary Cobain of FSOL, who has caused consternation among various people by his statements, adds to this reputation by saying 'people said it was going to be impersonal. It's personal! I can see you, I can feel you!'

The progeny of telephony, FSOL's culmination of 'Essential's' danceday, if it is to be a success for anyone, is going to be a triumph for British Telecommunications PLC. As the music comes cascading out of the speakers, the three screens blaze into life in a closely choreographed sonuvo-rama show of computer-generated art. All the clips are exactingly put together, containing individual narrative paths on each of the screens – and on the sixty-four TV screens split into micro-segments, with various sub-fragments of visual action. Quite a bit of these visuals owe considerably to William Latham and his computer companion – riding the dream boundary between inner and outer space, added to by any number of FSOL visual motifs, played and replayed – including a doll-girl, a Martian

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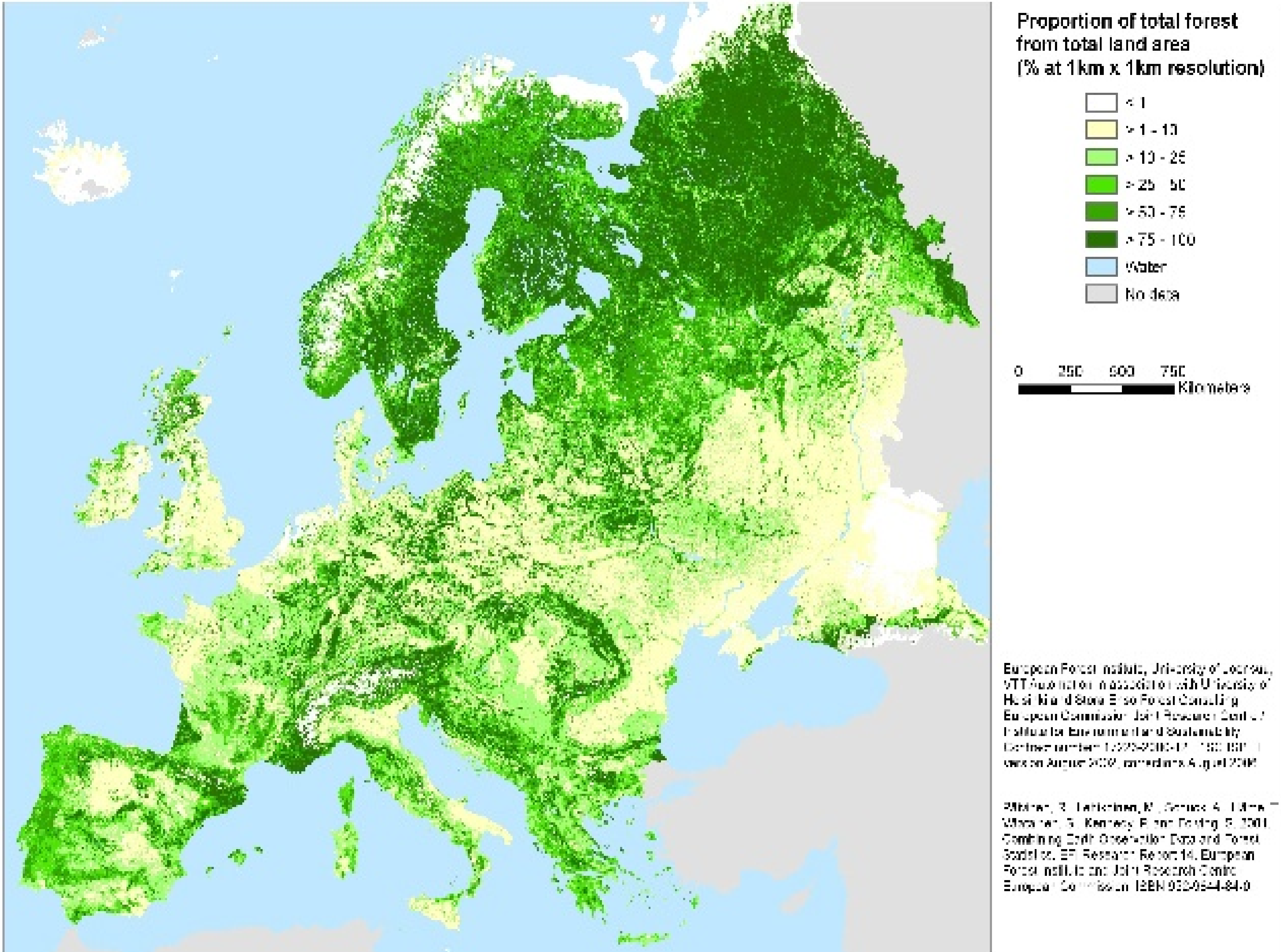
CHECK OUT

Riding on Empty

The Cycle Stations Project Exhibition

The convergence of sustainable architecture, design, and cycle networks


Proportion of total forest
from total land area
(% at 1km x 1km resolution)
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> 1 - 10
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> 50 - 75
> 75 - 100
Water
No data
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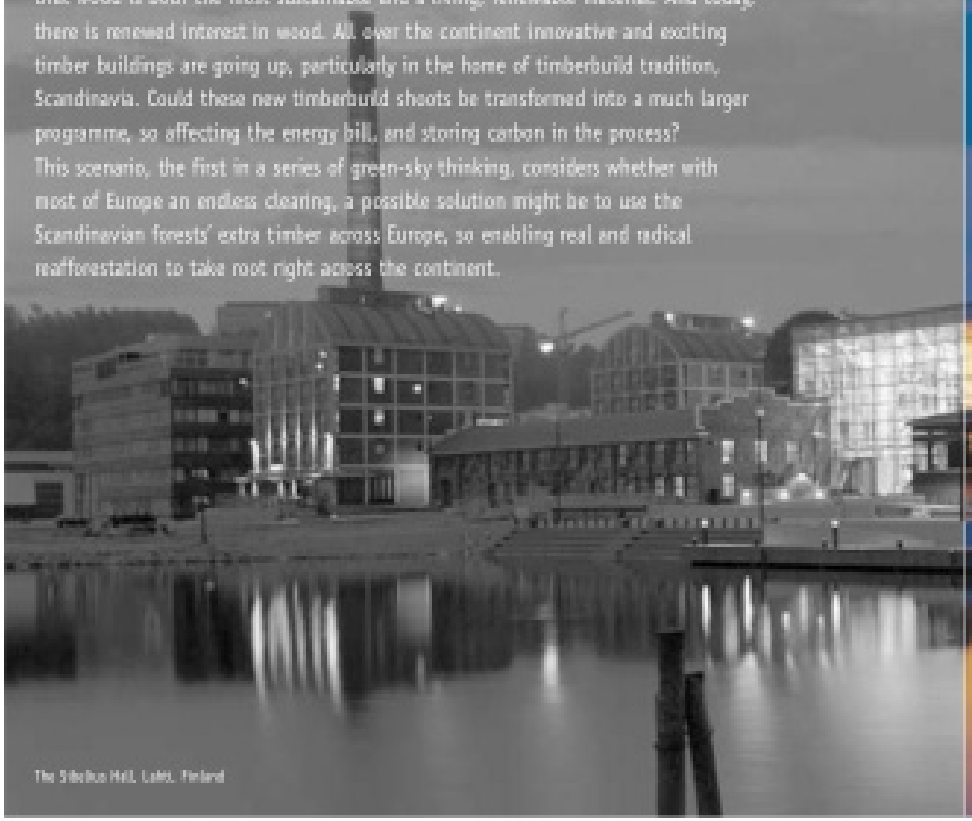
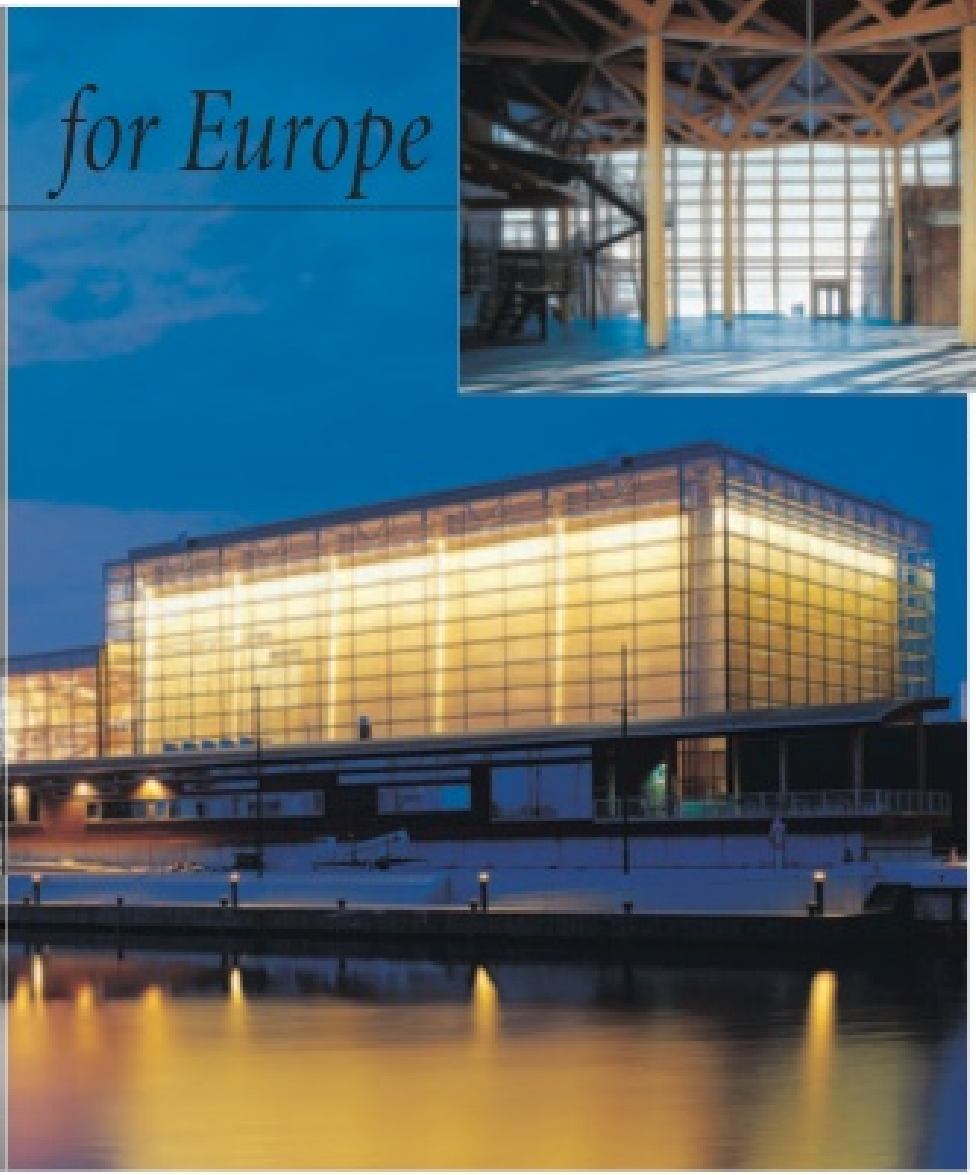
Kilometers
Combining Earth Observation Data and Forest
Statistics. EFI Research Report 14. European
Forest Institute and Joint Research Centre
European Commission.

A Timberbuild Renaissance for Europe

Building accounts for the largest chunk of the continent's energy bill, 40%. One way or another Europe needs to radically reduce this. Wood-based construction is a common sense, if usually ignored, option. Time and again, the point is made that wood is both the most sustainable and a living, renewable material. And today, there is renewed interest in wood. All over the continent innovative and exciting timber buildings are going up, particularly in the home of timberbuild tradition, Scandinavia. Could these new timberbuild shoots be transformed into a much larger programme, so affecting the energy bill, and storing carbon in the process? This scenario, the first in a series of green-sky thinking, considers whether with most of Europe an endless clearing, a possible solution might be to use the Scandinavian forests' extra timber across Europe, so enabling real and radical reafforestation to take root right across the continent.



The Sibelius Hall, Lahti, Finland



Johan Hedrén Hall, Finland

In the north of the world the boreal forest never lets up. From far eastern Siberia to Norway's Atlantic coasts, and on again across Canada, a green halo of trees – mainly pine and spruce plus a hardy regional birch – encircles the planet. But winter's lengthy whiteout, an endless sea of dark conifer green shrouds the northerly latitudes, where the shortest of growing seasons ensures agriculture finds only the fleetest of footings, leaving the trees, albeit amply managed, to remain. For Europe, the closest connections to these endless forests are in the Nordic countries: Finland, Sweden and Norway, the powerhouse of the continent's timber industry.

These Nordic countries are also home to one of the most respected timber architectural traditions on the planet. From Finland in the east to Norway in the west, an identifiably regional timber architecture and building culture has maintained unrivalled influence in the midst of far reaching changes in other European countries. Since the north's best known architect, Alvar Aalto, brought regionalist Finnish modernism to international attention in the 1940s and 50s, by including wood in his repertoire of core materials, the Nordic countries have been recognised for a timber modernism that contrasts with middle and southern Europe's continuing haunted preoccupation with twentieth-century artificial materials. Aalto's frequently quoted statement that 'wood will no doubt maintain its position as the most important material for sensitive architectural clients' seems truer today than it has ever done. For in the post-Kyoto world, trees and forests have taken on a new significance. European architects

local indigenous communities and lastly reining back wood-based material consumption, particularly the overwhelming increases in the paper and pulp needs across the planet. In short, less wood demand will mean fewer trees being cut down.

This is admirable but it does not address the pan-European need to radically transform its building culture if carbon emissions and energy use are to be genuinely tackled, as well as its 360 million or so inhabitants' need to live, dwell and work in attractive, effectively sustainable environments. It remains hard to see how the approach the Taiga Rescue Network, and those the network serves, would provide the increased timber-build needs of a continent.

Might industrial forestry, which is already moving from a purely wood factory approach, to the stewardry of forest ecosystems and their biodiversity, also move further in the direction of permaculture and community forestry? If there remains a fundamental disconnect between the two views, it is possible to conceive, at least, of a more benign ecologically post-industrial, rather than environmentally industrial, forestry emerging in the years ahead. This might yet deliver – in the various connotations of that phrase – to a Europe-wide building industry, at once cultivating elements of community forestry, while providing the level of logistical infrastructure community forestry is not set up to do. If this were the case, just as Europe's architects and builders look north towards a culture that takes timber building for granted, they would also be at the source of Europe's current largest reserve of this living material, and a culture that can provide many examples of where and how to take that building culture next. Only a half century ago few would have expected wood to hold any central part of architecture's future. A half-century on, this unlikely synergy between tradition and modernity may be about to come in from the cold, laying claim to the centreground of buildings' ecological future. OJ

Below: Landsat image of Finnish forest cover for the National Forest Inventory

Finnish Forest Industries Federation

1 see Hugh Hunsley 'Sustaining Architects?' in *Sustainability Symposium* at the AA, AA Files, 34, 1997, London; and Susannah Hagan *Taking Shape* 85-78 Architectural Press 2001, Oxford; reviewed in this issue of Fourth Door Review

2 Figures used by TRADA (Timber Research and Development Association) put the bought energy per cubic metre, at 390 kWh for wood, and 85000 MJ for aluminium, 82000 kWh, steel and 11000 kWh for plastics

3 see Oliver Lowenstein 'Station to Station' *Building for a Future*, winter 2000/1 p40-45

4 Christoph Affentranger, *New Wood Architecture in Scandinavia*, Birkhauser Verlag, Basel, 1997 p17

5 *Ibid*, p17-23

6 *Historical European Towns*, ed Risto Saikaluri, University of Oulu, Oulu, 2000, 82-89; *Arkkitehti Magazine* 6, 2001, p14-23

7 Bjorn Berge, *The ecology of building materials*, Architectural Press, Oxford, 2000

8 Bjorn Berge 2002

9 Reuben and Van Hinte, *Lightness, the Inevitable Renaissance of Energy Structures*, Dutch Design Institute, Amsterdam, 1999

10 These figures are anecdotal. The author sought authoritative information from the both the Finnish Forestry Research Institute and the EU statistics bureau, but there appears to be no pan-European figures on timber needs held by building type and in comparison to other material resources.

11 Wood, NTC, Stockholm

12 Robert Webb, *Blueprint*, Sustained Release, June 2001, p7

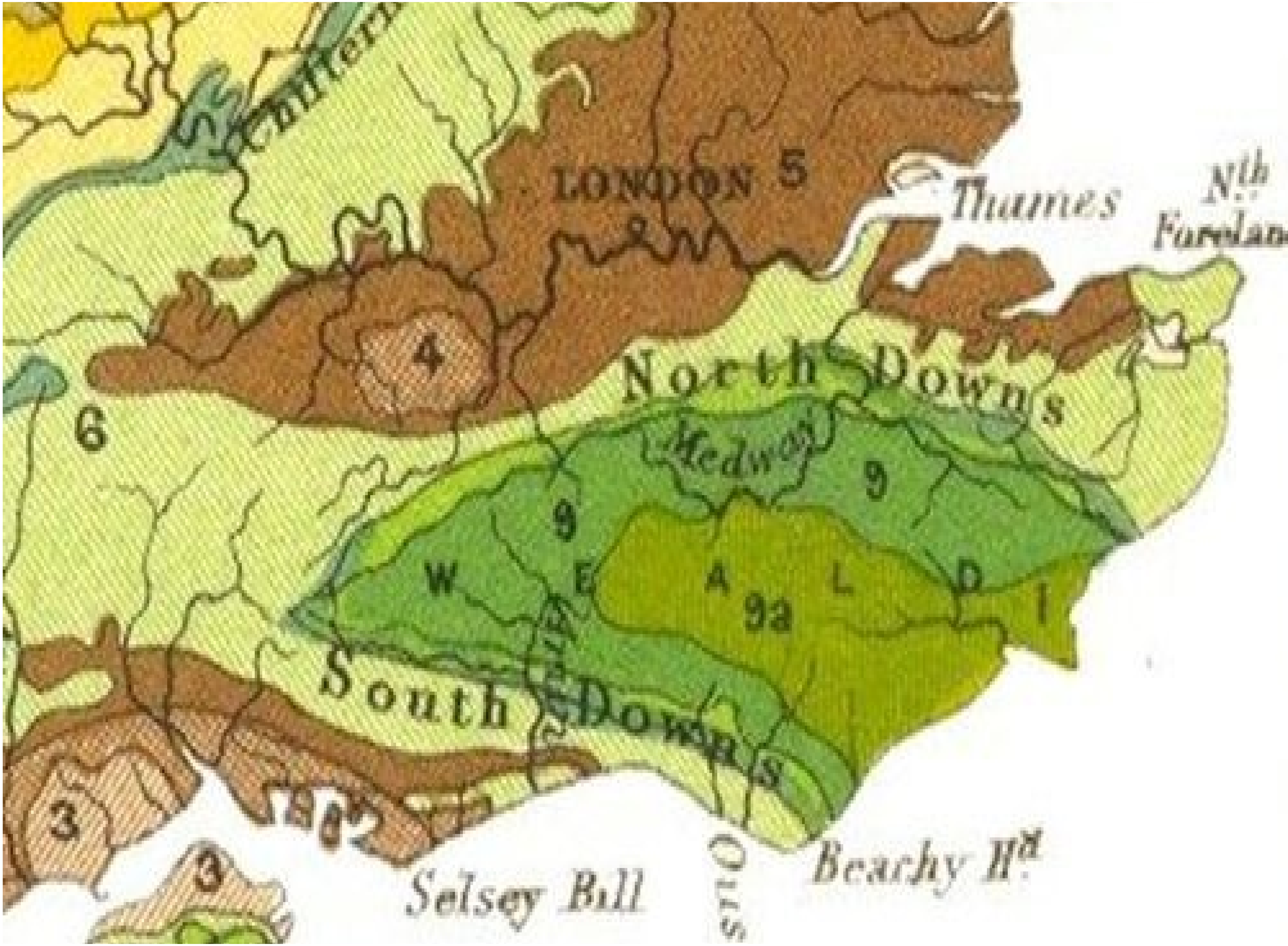
13 Environment Daily, www.environmentdaily.com Apr 3, 2002

14 Daniel Gawthrop, *Vanishing Vista*, Greystone, Vancouver, 1999, Taiga Rescue Network, Regional Status Reports, TRN, Fact Sheet, The Scandinavian Forestry Model, 1999, www.taigarescue.org

15 TRN, Fact Sheet, The Scandinavian Forestry Model, 1999, www.taigarescue.org

16 TRN, The last of the last, The Old-growth forests of Boreal Europe, www.taigarescue.org/old_growth

17 TRN ibid



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Published by the Whole Earth Catalog No. 38 Winter 1981 $4

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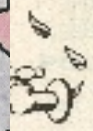
WHERE YOU AT?

What follows is a self-scoring test on basic environmental perception of place. Scoring is done on the honor system, so if you fudge, cheat, or elude, you also get an idea of where you're at. The quiz is culture bound, favoring those people who live in the country over city dwellers, and scores can be adjusted accordingly. Most of the questions, however, are of such a basic nature that undue allowances are not necessary.



1. Trace the water you drink from precipitation to tap.

2. How many days till the moon is full? (Slack of two days allowed.)

3. What soil series are you standing on?

4. What was the total rainfall in your area last year (July-June)? (Slack: 1" for every 20".)

5. When was the last time a fire burned your area?

6. What were the primary subsistence techniques of the culture that lived in your area before you?

7. Name five native edible plants in your region and their season(s) of availability.

8. From what direction do winter storms generally come in your region?

9. Where does your garbage go?

10. How long is the growing season where you live?

11. On what day of the year are the shadows the shortest where you live?

12. When do the deer rut in your region, and when are the young born?

13. Name five grasses in your area. Are any of them native?

14. Name five resident and five migratory birds in your area.

15. What is the land use history of where you live?

16. What primary geological event/process influenced the land form where you live? (Bonus special: what's the evidence?)

17. What species have become extinct in your area?

18. What are the major plant associations in your region?

19. From where you're reading this, point north.

20. What spring wildflower is consistently among the first to bloom where you live?

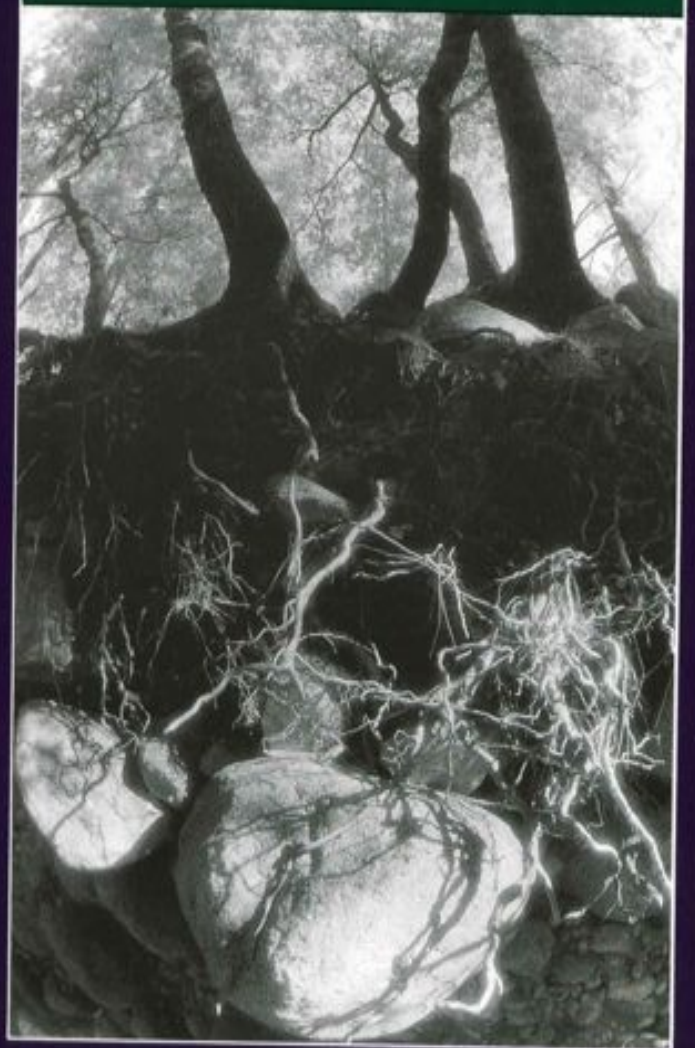
SCORING

0-3	You have your head up your ass.
4-7	It's hard to be in two places at once when you're not anywhere at all.
8-12	A fairly firm grasp of the obvious.
13-16	You're paying attention.
17-19	You know where you're at.
20	You not only know where you're at, you know where it's at.

Quiz compiled by: Leonard Charles, Jim Dodge, Lynn Millimon, Victoria Stockley.

Essays by Gary Snyder

The Practice of the Wild





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The following are examples of some of Santon's investments and developments. This list is not exhaustive. If you would like more information about a particular development which is not shown, then please contact us.

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Q16 Building, Quorum Business Park, Newcastle

Santon House, Ealing

Phoenix Ironworks, Lewes

Re-envisioning Phoenix: Broadening the Conversation

A *Fourth Door* exhibition, workshop and events proposal

Making Places - Spring 2014

www.makinglewes.org

A series of talks from leading figures in the fields of sustainability, architecture, and urban design, hosted by MakingLewes.

25th April. 7.00pm, Elephant & Castle*

Adam Khan

Adam Khan is an award winning architect working on a number of housing and cultural projects, including with the Peabody Trust in London and on co-housing in Hamburg. His recent floating wildlife centre, Brockholes, has been an influential example of contemporary sustainable design. Adam will talk about some recent projects, including urban planning, housing and masterplanning.

www.adamkhan.co.uk

9th May 2014. 7pm, Elephant & Castle*

Luke Engleback

Luke Engleback is a chartered landscape architect and urbanist who advocates a whole system approach to resilient city building, addressing climate change adaptation, resource depletion, people and landscape. His studio has applied these principles at all scales ranging from 30 year urban frameworks for 32 000 homes to small communities.

www.studioengleback.co.uk

23rd May 2014. 7pm, Elephant & Castle*

Sarah Wigglesworth

Sarah Wigglesworth Architects are well known for their experimental use and reuse of materials. Sarah's home and studio, 9/10 Stock Orchard Street, is the first ever contemporary example of an inner-city straw-bale building. Sarah will talk about this and other examples of upcycling and recycling of buildings and materials across a variety of contexts, including self build.

www.swarch.co.uk

Making Places is the first in our series of events exploring alternative and imaginative ways of making our town for the future. For more information visit *www.makinglewes.org* or contact *makinglewes@outlook.com*

* The talks take place in the upstairs events room. Suggested donation of £3, drinks available at the bar.

Fourth Door Research
www.fourthdoor.co.uk

Sarah Wigglesworth’s packed April talk – Siobhan Davies dance studio on right


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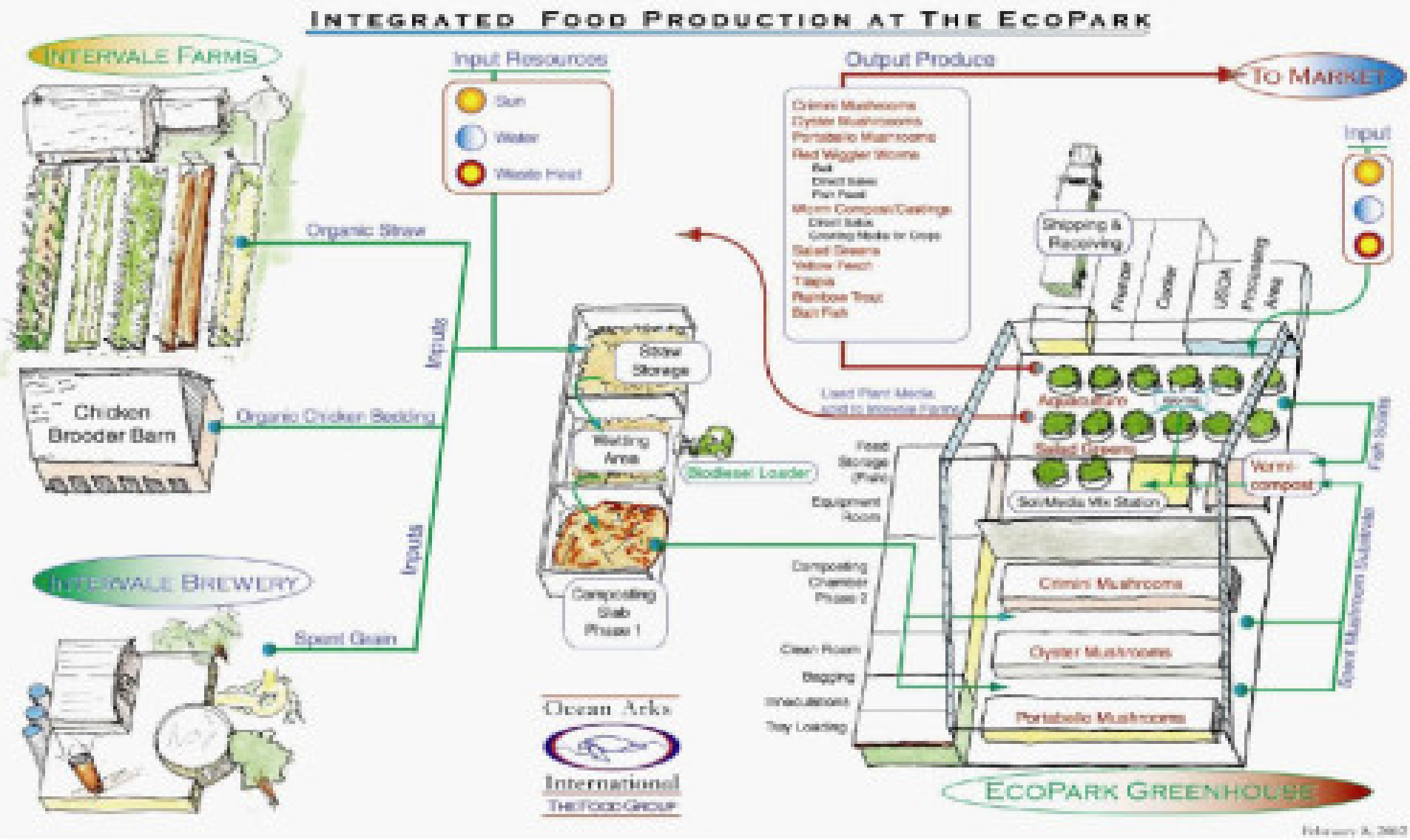
Design for Intervale Eco-Park, Burlington, VT

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Post Festival – Successful again – But challenges more obvious, particularly **capacity** and **lack of funding**. Exhilaration and energy of first festival still there but diminished.

Also uncertain situation in the town as the Phoenix Estate planning application came to a head.


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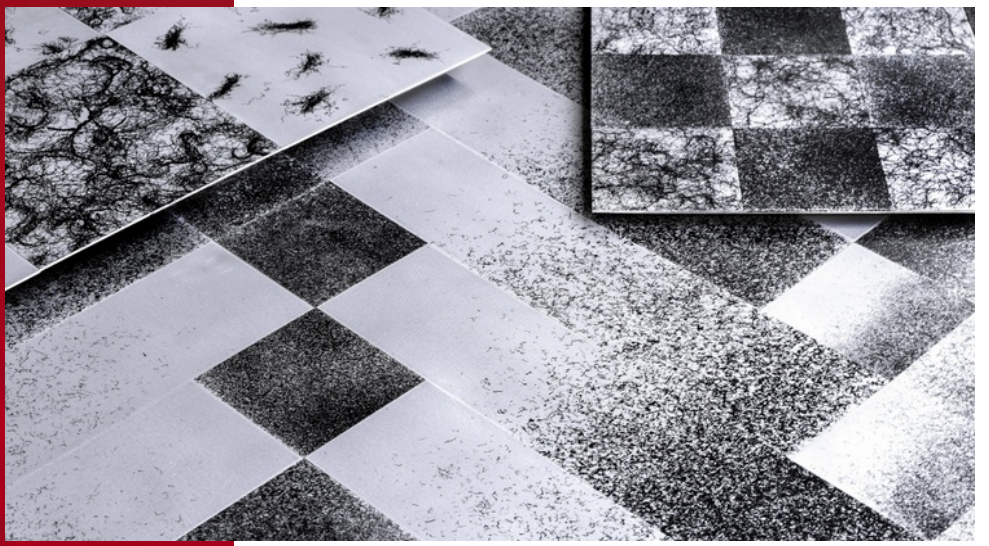

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Behind the scenes at Glyndebourne: Turn to Page 14

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Turkish Baths future: Petition calls for re-think

Full story
Page 3


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