

Restless Landscapes

This paper discusses the work of the architectural design research and teaching partnership of Smout Allen around the theme of Restless Landscapes. The work proposes that the intrinsic features of the landscape such as topography, geography, climate, and man's manipulation of rural and urban environments provides the designer with a language that can inform design. Can one exploit the conditions that physically and perceptually shape the landscape to augment architectural design and bring to it a sense of nature and environment illuminated? Two design cases conceived between the realms of architectural and landscape design, architectural competitions and conceptual art illustrate this argument. An iterative design process of drawing, modelling and test prototyping is employed that compliments the notion of the restless landscape.

Smout Allen, Mark Smout and Laura Allen
Bartlett School of Architecture, University College
London
m.smout@ucl.ac.uk
l.allen@ucl.ac.uk

INTRODUCTION

The work of our architectural design research practice scrutinises and interprets the dynamic and fluxing surrounding environment, and its reaction and adaptation to natural as well as artificial influences.

Man, particularly in agricultural practices, continues to mark the land, relentlessly shaping the surface from wilderness to cultivation to suit the strategies of mechanisation, irrigation and inhabitation. The 'countryside', evolved over centuries, has been described as under the influence of nature but under the control of man. Features created by agriculture, coastal management, and local infrastructures have been absorbed by the fluid and yielding nature of our surroundings. The resulting utilitarian topography, a sustained artifice, has become, for many, a picturesque aesthetic, an often cherished rural environment where sentimental attitudes that inform our visual perception of the landscape become key.

Our work acknowledges the continued redefinition of the word 'landscape'. The historical context of landscape in representational terms, the picturesque landscape, parks and paintings of the 18th and 19th century, the panorama and diorama scenes, depicting European cities or recounting historical events for mass spectacle, are influential in the expression of landscape as both a visualisation of 'natural' space and as an event.

The photographs of Edward Burtynsky suggest an edgy relationship between nature and technology. The reshaping of terrain by modern industrial activities of refineries, quarries and waste sites, often photographed at indeterminate scale, illustrates the vast extent of man's intervention in the landscape. The result is an appreciation of the built environment as 'manmade sublime' [1].

Jørgen Dehs [2] describes the current acknowledgement of the word 'landscape' as not simply a geographical term but as a metaphor. "We have an interest in landscape when we feel the need to stretch our eyes. Along with this common understanding — and probably because of it — the term landscape enjoys a comprehensive career as a metaphor... Every chaotic totality is assembled into a unity as soon as it is labelled a landscape. The term 'urban landscape' sheds a redeeming glow upon even the most dejected neighbourhood; 'industrial landscape' transforms any romping ground for the ravages of industry into an object of aesthetic sensibility."

In this paper we identify two design cases where the forces of environmental transformation, past and present form the focus of our attention. The ephemeral character and dynamic forces of the environment in these marginal territories similarly influence our architectural landscape. This research proposes architectural interventions and explores observational and representational techniques through which the mutability of nature is exposed.

Both design cases demonstrate unique responses to the augmentation of architecture and its prevailing relationship to the restless landscape. In addition each site requires the invention of different processes of design investigation.

The first case, Panorama Projects, is in response to a competition by the East Anglian Development Agency for a 'Landmark for the East of England'. The projects define an architectural landscape of local specificity as well as providing a visual spectacle of both panoramic (gigantic) and human (miniature) proportions.

These terms are defined by Susan Stewart [3] in her essay on The Gigantic, Skywriting: Exteriority and Nature. "Our most fundamental relation to the gigantic is articulated in our relation to landscape, our immediate and lived relation the nature as it 'surrounds' us... We move through; the landscape it does not move through us. This relation to the landscape is expressed most often through an abstract projection of the body upon the natural world. Consequently, both the miniature and the gigantic may be described through metaphors of containment—the miniature as contained, the gigantic as the container."

The second, an on-going proposal, looks at the threat to inhabited land from rising sea levels and coastal erosion in relation to government policies for coastal management. This relationship is particularly visible in the North Norfolk where the coast is disappearing day by day. This proposal also deals with landscape augmentation and visual perception, but the emphasis is on using event of collapsing, landscape as a territory for inhabitable spaces.

DESIGN CASE 1, PANORAMA PROJECTS

The Panorama Projects are four proposals for four distinct regions in the east of England, which are brought together by their relationship and association to the landscape. Each is designed to augment the existing landscape, enhancing the natural dynamic of the site, taking advantage and sometimes mimicking its inherent qualities, exposing its distinctive character, its history and its future.

The East Anglia is predominantly a flat landscape of low and undulating arable land. The region has an intimacy with its climate where the distant horizon and awe inspiring voluminous sky have inspired artists and holidaymakers alike. The landscape, uninterrupted by hills and valleys, can be observed as a panorama, 'a circular gaze that embraces the whole horizon in one, or almost one go' [4]. Each design seeks to enhance this relationship between the ground and sky by utilising elevated positions, constructed vistas and reflective surfaces; they reach out to the sea and up to the clouds. The architectural interventions, in addition to controlling or exploiting the view from within, are experienced on or in the landscape from remote positions.

Silicon Fen

The Cambridge levels are sliced and formed by the deep cut of drainage ditches and the flat black carpet of fens that stretch out uninterrupted to the horizon. The proposal echoes the pattern of levees and drains with a sinuous arrangement of reflective surfaces; solar heated bathing pools, freshwater ponds and photovoltaic panels (see Figure 1).



Figure 1: Silicon Fen model

The surrounding dyke is raised to eye-level allowing each surface to act together to mirror the sky in the earth—a vertical relationship. This panoramic observation of the landscape is repeated horizontally by means of a digital camera obscura observing both the array of channels and the landscape beyond.

The obscura image is relayed to a cylindrical room in a cloaked building, where a large table receives the projection of the surrounding environment. The table is enabled with interactive gesture recognition software so as the image is touched, annotations of contextual information, i.e. geography, geology, meteorology, history, and commerce, are revealed. Touching the table also selects a colour that flushes the internal wall (see Figure 2).

This region, so shaped by agricultural necessity has recently become the home of scientific industries; the scheme acknowledges this local shift by employing sustainable environmental technologies to enhance the nature of the site.



Figure 2: The wall of the obscura room is filled with light

Bedford Air

The gently rolling topography of Bedfordshire and Hertfordshire are the site for a flock of wind 'kites' (see Figure 3 and 4). Each kite records its movement as it swoops—its relationship with the sky and the horizon.

A pair of cameras mounted on each kite relay stereoscopic live images to the pilot's viewpoint, providing a three-dimensional panorama from the perspective of the kite. As the horizon appears to hover and glide the pilot achieves the sensation of flying.

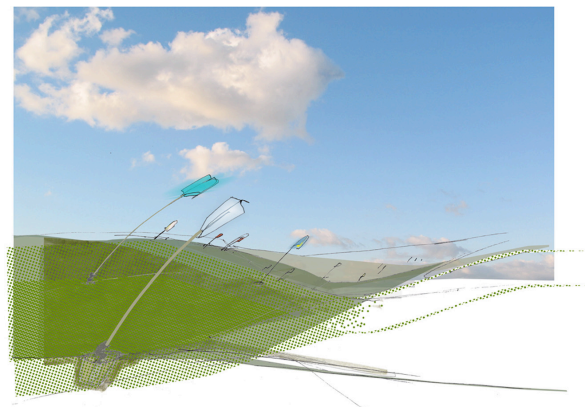


Figure 3: The kites occupy a vertiginous space, the territory of the sky, reacting to currents of air flowing across the landscape.

Each kite is connected to the ground by a semi-flexible pole anchored to a pivoting base that is mounted in a water-filled reservoir to limit and slow movement. The kites perform a balletic choreography in the sky.



Figure 4: Bedford Air model, mounted and showing the use of the illuminated horizon

Coast

The North Norfolk coast is a shifting landscape of sea and sand. Long shore drift and prevailing winds have shaped a region of expansive beaches, dunes and crumbling cliffs—a landscape of currents and contours, sandbanks and quick sands, erosion and deposition.

Our proposition occupies the shallow and fluctuating horizon of the sea with a string of ‘drift markers’ that react to and demonstrate the motion of the sea and wind. (see Figure 5). The top wing rotates and swings as a vane in the wind, the lower wing floats on the surface of a wave and responds to the flow of the drifting tide—shifting and glistening on the horizon line.

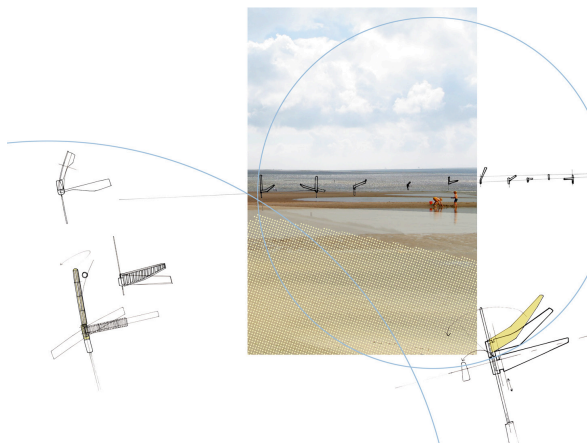


Figure 5: Longshore drift, wind and tide is registered momentarily by markers placed in the intertidal zone

The tubs are anchored in position in the net and are partially buried in the sand (see Figure 6). Each tub marks out the transitory territory of the holidaymaker and contains a deployable fabric hut for shelter. The shelters are covered in thermally reactive fabric that registers changes of temperature and exposure to UV light (see Figure 7).

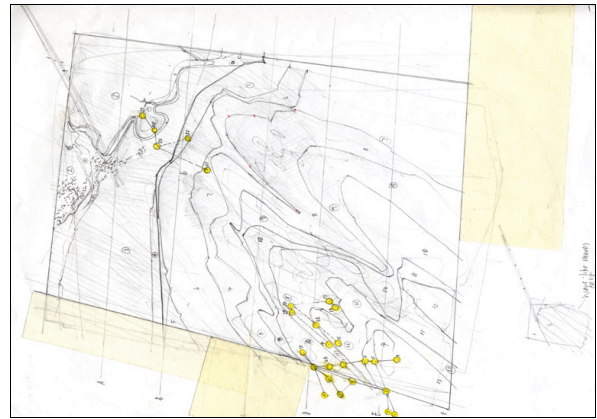


Figure 6: The net reveals the slow shifting form of the dune landscape.

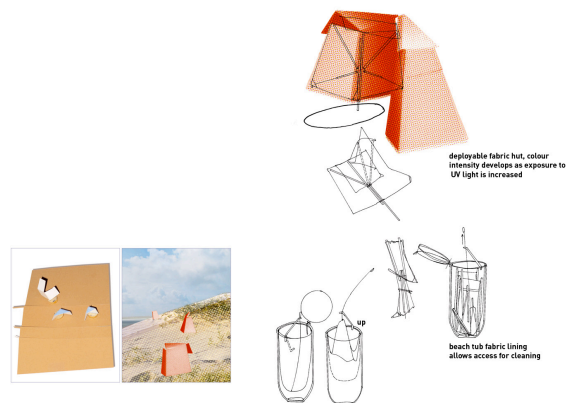


Figure 7: Details of deployable beach tubs

Salt Marsh

The estuaries of Essex form a liquid edge to the county. This fragile boundary, that extends and retracts with the ebb and flow of the tide, reinforces the connection between the sea and the land. A shallow plate is inserted into the intertidal zone, lying low on the horizon (see Figure 8). The plate beds into the mud flats, with its tips in the water and reaches up to the grass land beyond.



Figure 8: Salt Marsh model held to the sky

The proposal responds to current thinking on a managed retreat of the sea defences; returning land to salt marsh to encourage brackish vegetation, establishing the flood plain as an environmental buffer. The proposal has 3 territories; oyster lanes fed by nutrient-rich run-off from the salt marsh and high tide, grazing land and a market. The panorama is framed and partially concealed by a tilted reflective edge to the market place, which reaches out endlessly between the sea and sky (see Figure 9).

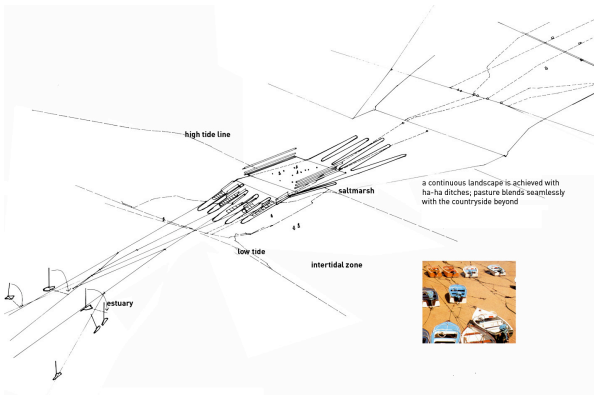


Figure 9: The market sits within the landscape designed for the managed retreat of the estuary sea defences

Prototypes and presentations

Each of the four panorama projects is explored by a model that can be held up to the sky. The models, although of a similar scale, are not scaled in the traditional sense; they are instead designed to be held in the palm of the hand. The models incorporate a number of modelling methods in their production. Digital manufacture techniques were particularly important to ensure that even small details can be picked out for scrutiny. CAD/CAM modelling in acrylic and laser etching of metal sheet allowed the models to be fitted together rather than fashioned. Alternatively, or for presentation purposes, the models can be individually mounted in a glazed box, positioned with one another relative to a horizon line. The boxes are backlit and mirrored to indicate the panoramic gaze, reflected skies and the repetition of elements of the design.

DESIGN CASE 2, RETREATING VILLAGE

The coastal village of Happisburgh in North Norfolk is falling into the sea. (see Figure 10). The sea cliffs, dunes and sea defence structures protect this predominately low-lying county and its extensive freshwater Broads from inundation.

Climate change, rising sea levels and government policies such as the Shoreline Management Plans have conspired to leave the village, which has always been perilously close to the cliff, undefended from the action of the sea and the wind, 'to allow coastal retreat through no active intervention' [5]. Streets, hotels, houses, sheds and flowerbeds have all gone over the edge.



Figure 10: Remnants of a property on Beach Road

Our proposal for a retreating village of small houses and streets is deployed in the disintegrating territory between the sea and the land. The village responds to predicted rates of retreat, as much as five metres per year, by sliding and

shifting to safer land. To achieve this the scheme employs a mechanical landscape of winches, pulleys, rails and counterweights, mimicking techniques for hauling boats from the waves. It also adopts an architectural language of impermanence, of permeable screens, loose-fit structures and cheap materials that compliment and contribute to the nature of the restless landscape.

The architecture responds to its position, sited on a shifting and elevated horizon, between the sea and the land. The main inhabitable spaces are concealed behind large slated revetments that provide a secondary protection from the elements. The slats are reflective on one side and are tilted and placed eccentrically to achieve a disruptive pattern (see Figure 11). The pattern, which aims to disguise the village on the cliff and to make its elevation and location less tangible, adds to the sense of the site and the architecture losing ground to the sea.

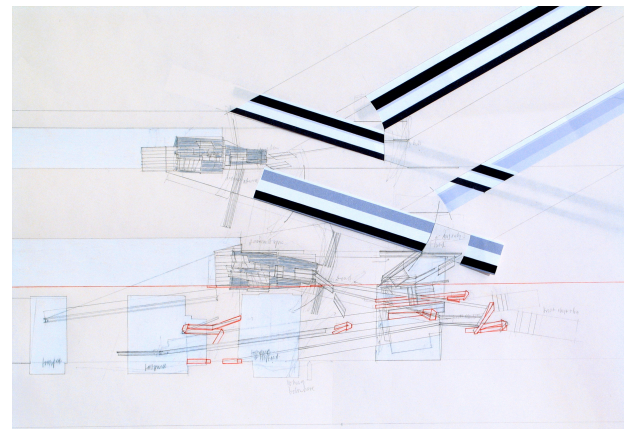


Figure 11: Two houses moving up and back

The proposal is examined and designed through an ongoing series of working drawings, existing between the territories of sketch diagrams and architectural orthographic representations. They contain multiple viewpoints and simultaneous dynamic shifts of position (see Figure 12).

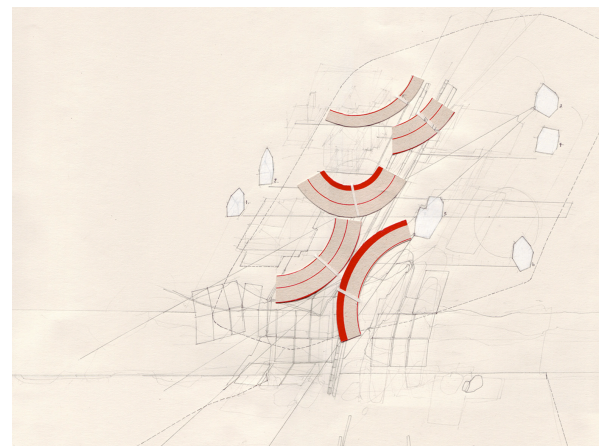


Figure 12: Early drawing mapping remaining properties

Horizons and shape recognition

The horizon, the point where the sky meets the edge of the visible ground plane, is a place that is observable but not habitable. The apparent condition is mutable, depending on the contrast of the sky relative to the object, the light level and the perceived hue, which fluctuates throughout the day and throughout the seasons. Perception of the horizon in a flat landscape is dependant on recognition of shape, shine, shadow and silhouette (see Figure 13). The architecture of

the retreating village employs these basic strategies to selectively reveal itself to the viewer.

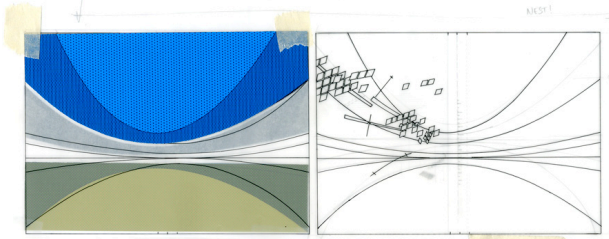


Figure 13: Illuminating the horizon boundary

The roving apparatus

To inform this design strategy a series of ballistic tests were proposed employing a roving apparatus from which devices are launched into the air. Each reaches a predetermined height to appear to the observer to be on the distant horizon. Here a detonation occurs which triggers a momentary event.

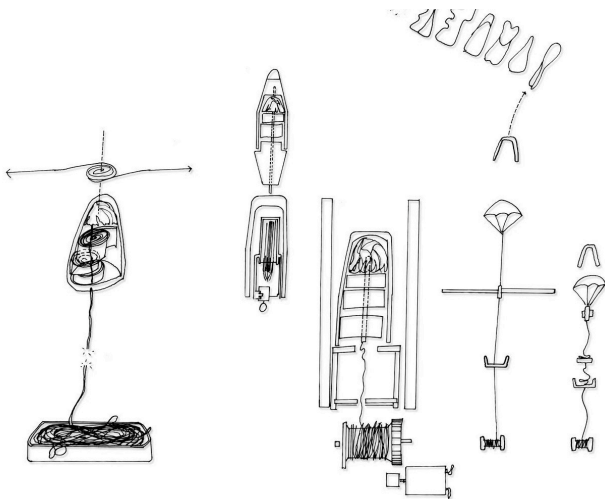


Figure 14: Sketches for ballistic devices.

There are three ballistic devices designed with individual performances (see Figure 14). The first, which explores fractured or blurred horizons, silhouettes of trees for example, deploys a reflective net. The second looks at momentarily illuminating the horizon boundary, positioning reflective fins at the visible horizon threshold and tilting them so that they glint or flash to the observer. The third unravels a high visibility band in a linear fashion (see Figure 15). Drawn interpretations of the deployment bridge the gap between the empirical readings, observation and the architectural propositions.

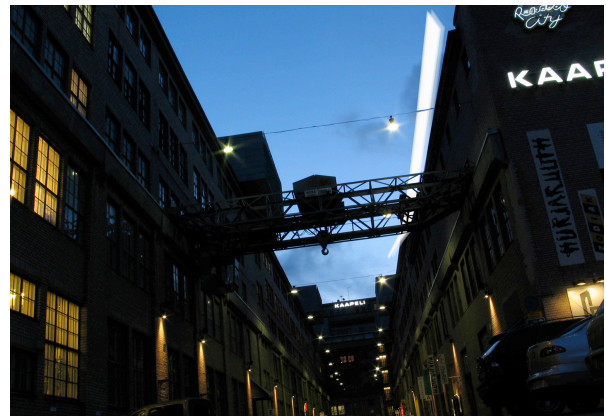


Figure 15: Tracing a dynamic line through a hard-edged horizon such as an urban landscape

SUMMARY —MAKING IN THE DESIGN PROCESS

The process of design for architectural interventions in mutable landscapes requires a working methodology that is equally adaptable and varied and this has become key in our research practice. The role of ‘making’ in the design process includes documentary photography, collages, prototypes, models and drawings which work as two and three-dimensional examinations of site, behaviour and events, rather than purely representing notions of static space and material. Normative demonstrations of architectural space by means of orthographic projection are avoided, as these tend to depict simplified, flattened or foreshortened viewpoints. The creation of test sites on and in the surface of the paper allows the work to react to and describe the iterative process of design. This work becomes a materialisation of the practice of design.

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