

## CREATIVE PLANET

National Museum of Science and Industry,  
Wroughton, England

Campbell & Campbell 2001-2004

Campbell & Campbell is commissioned by the National Museum of Science and Industry in London to restore and re-vision the landscape of a historically and culturally significant mile-square tract of land in southwestern England near the ancient monuments of Stonehenge and Avebury. We are charged to build on the site's ancient natural, cultural and spiritual heritage to create a landscape paradigm that will set a new global standard for sustainable environmental reclamation, restoration and stewardship. The site and landscape design embodies the Museum's identity as an institution as well as addresses its complex operational needs, including the periodic accommodation of very large public events.

### Concept

Early in the last century in response to military threats to this Nation and her Allies, the rolling fields, pastures and woodlands of this Wiltshire landscape were reconfigured into a Royal Airforce Base. As the topography and vegetation were leveled to serve this single vital purpose, the landscape lost its ecological, aesthetic, qualitative and functional diversity and fruitfulness. Fortunately now redundant, the airfields lie empty, stark reminders of dangers past.



The global range and magnitude of this new millennium's growing ecological crises present indiscriminate threats to all earthly life. To meet these dire challenges, NMSI intends to bring these airfields into usefulness once more through re-visited landscapes, which embody a paradigm shift in the relationship between humanity and the rest of nature from extracting to sustaining.

Drawing from the creative wellspring of nature and the achievements of human ingenuity, their design is authentically based on the palimpsest of natural and human made landscapes of this specific site and region. Both developed from and experientially expressive of past, present and experimental sustaining science and technology as well as rigorous aesthetic, moral, ethical and theological discourse, these landscapes shall once again be put into service of the wellbeing and safety of this Nation and all living beings.

Works of landscape are unique artefacts in that they speak about nature through nature, and that they are, like us, alive. Neither entirely human-made nor wilderness, they describe a middle ground whose unfolding realisation depends upon an ongoing collaboration between people and nature. The landscapes of Creative Planet intend to embody a new paradigm of collaboration, one based not on the non-renewing extractive mandate of the past two centuries, but on ever-renewing organic processes. As advances in science and technology

make increasingly clear, there are not two worlds – the wellbeing and survival of humanity relies upon the wellbeing and survival of nature.

As the enduring heritage of the human made landscapes of the North Wessex Downs vividly portray, landscape lies at the nexus of science and culture. Its physical form, features and composition are the result of technological advances. Its aesthetics and symbolic meanings reflect contemporary worldviews regarding myriad aspects of humanity and nature from politics to theology, from ethics to social standing.



Landscapes offer not only extraordinary opportunities but carry singular responsibilities in expressing the vision, concept and values of Creative Planet's sustainable development for they not only propose or recommend but also authentically manifest a way of inhabiting the world. As immersive environments for experience, landscapes are extraordinarily accessible, communicating simultaneously to the whole person on multilevels: perceptually, kinaesthetically, emotionally, intellectually, morally, ethically, spiritually and intuitively through memory and imagination.



To augment the stream of once-removed information available from print or electronic sources to the 'literate' individual, these landscapes offer places for intimate, immediate, personal observation; experience; guided instruction; scientific experimentation; recollection and reflection within and of nature. Direct observation of nature is of course one of the fundamental tools of science and art specifically and of all human creativity in general.



*Ancient Coppice – Clout's Wood*



By offering inviting places which reveal, emphasize and poetically articulate authentic organic systems and cycles, these landscapes intend to re-connect people with the multifaceted touchstone and unfathomable wellspring of the creativity of nature.

#### The Brief

*"I will live in the Past, the Present, and the Future," Scrooge repeated, as he scrambled out of bed. "The spirits of all Three shall strive within me."*

*-Charles Dickens*

Within the overall rubric of sustainable development, the scientific, cultural and economic opportunities and constraints presented by this site and region, and the project budget, this landscape brief forms a nexus of intersecting polarities. These include: preservation and restoration contrasting with retrofit and innovation; undomesticated ecological processes and patterns of use contrasting those of humans; rediscovered and state-of-the-art materials and systems contrasting with experimental ones; contextualism contrasting with identity and power of place; neighbourhood requirements contrasting with those of the larger region, nation, and world; initial resource and funding allocations contrasting with long term uses and costs, etc.



To resolve these and complexities this landscape master plan has been developed from the past and present; natural and humanmade; utilitarian, aesthetic and symbolic landscapes of this specific site and region. Simultaneously, the plan seeks to embody sustainability technically, physically and poetically while weaving together contemporary and future human needs and sensibilities and those of wild species. At once practical and visionary, this master plan intends to provide an integrated, comprehensive yet flexible framework for responsible development over time.

## THE PLAN DESCRIPTION

### Overall Organization

As this gently rolling site was transformed into an airfield early in the last century, its landscape underwent a functional, qualitative and ecological as well as physical reduction. In order to serve

its singular purpose, its topography and vegetation were essentially leveled. The expansive sweep of the star shaped pattern of runways ringed by the massively scaled, hangers accentuates the sense of "openness" in the landscape and a concurrent, immediate awareness of the great bowl of sky above with its dramatic weather patterns. Conserving this landscape quality in the design, a great, gently dished meadow encircles the wetlands and lake at the center of the project. This large-scale open space accommodates seasonal festivals and events as well as regular gatherings of groups such as the Aero club and provides habitat for diverse species such as the Skylark and raptors. Ringed by structures, the natural topography and earthworks, and woodland and other plantings, this meadow also provides a dark sky for after-dark celestial and wildlife observations. View corridors coinciding with the alignments of (and recalling) the runways visually connect this shared open space with the five Knowledge Farms and a collection of landscapes.

The interior circulation of the site is organised around an elliptical loop and interior ring set within a varying ditch and bank system. The visual experience of these routes is choreographed through the landscape to orient visitors and to offer insights into the sustainable development and the Knowledge Farms. Although diverted where necessary, the existing service loop at the edges of the site is retained as is wherever possible.

### Earthworks, Meadows and Woodlands

In collaboration with existing topography and plantings, a varying combination of earthworks and woodlands organize and delineate the overall infrastructure and circulation patterns as well as the major open spaces and features of the site. These sculpted earthworks inflect the traditional ditch-and-bank terrace and lynchet configurations of ancient times in the service of present landscape needs. They are formed not only from typical cut and fill balance but also from materials salvaged from the on-site runway removal. As all the landscape features and processes of the project, these earthworks serve multiple, layered uses depending on their siting, formation, scale and context. Sometimes or all at once they become corridors for pedestrians, vehicles (both visitor transport and service), and wildlife; links for utility routing, channels for directing and collecting precipitation and irrigation run-off; terraced fields for agriculture; protection for creating micro-climates; view direction and screening; an amphitheater, etc.

### Surface Waters

Recognizing that globally water is perhaps the most precious natural resource, surface water management is one of the primary organizing elements of the project. Throughout, channels and ponds gather and purify this water biologically before it is re-used on site or returns to the soil to recharge the groundwater supplies. These catchment water features serve alternately as fish, human or animal food or biomass farms; energy production where cascades are possible; ornamental fountains or etc. at Red Barn, Uffcott and Hackpen.

The largest water body is the wetlands and lake at the heart of the site. To accumulate water over time from on-site run-off and perhaps bores, this major feature is located along a natural drainage pattern identified on early topographic maps. Since wetlands are one of the most

endangered habitats worldwide, the lake is surrounded by a wide, undulating band of wetlands and shrub plantings. Boardwalks winding through the reeds and willows allow visitors to experience the rich wildlife communities. A wooded island offers refuge for sensitive wild species and the human imagination

## Vegetation

In contrast to the arcing geometries of the ditch and bank earthworks, the configuration density, and species composition of the woodland web shifts according to soils, exposure, context and ecological and cultural needs as it moves over the site. Its design will be shaped equally by the needs of wild species as those of people. This web of trees and lower growing, companion plants becomes sometimes a deep, dark, wild wood, sometimes thinning as part of a field-side hedgerow, sometimes an experimental coppice farm, sometimes a view or windscreen, etc. Always, following the traditions established in Clout's Woods, it is managed as a living resource for people and other species. As Clout's demonstrates 400 years of traditional forestry methods, these new plantings will demonstrate innovative methods of agro-forestry. From near and distant views, this woodland merges Creative Planet into existing wood and hedgerow patterns and softens views of the existing and proposed structures. Rides and glades within the woods define special habitats, landscape features, special gardens and gathering places of various sizes. The initial woodland plantings on the north reaches of the site will begin the connection between the wildlife of Clout's Woods and Coombe Bottom as well as the process of screening views of the existing structures and ameliorating the wind patterns.

## Knowledge Farms

The five Knowledge Farms present the opportunity and responsibility to demonstrate appropriate sustainable development of aesthetic, agricultural, recreational, experimental, inspirational and contemplative landscapes and gardens. They are briefly described and “personified” below.

## Sustainable Landscape

### *Red Barn - The Gardener*

The landscape of Red Barn will encompass both permanent gardens and a landscape framework for more ephemeral showcase gardens, which demonstrate sustainable garden features and techniques. A primary garden shall be a meditation on the genius loci of the indigenous landscape of this site and region. Composed of the essential, characteristic elements, inhabitants, systems and cycles of this place, this garden shall reveal the unique, inherent spirit, which existed here before human awareness. From this garden, distant views shall connect this garden easterly to Clout's Wood and southerly to Creative Planet's restored woodland.

Connected to interior displays and electronic information, a narrative, stroll garden shall trace the ancestry of regional, introduced, selected or hybridized plant species and garden features, styles and techniques. Temporary showcase gardens will provide responses to specific, typical gardening concepts or conditions illustrating sustainable development from rainwater collection to composting to edible planting to habitat gardens for specific fauna to micorrhizal soil inoculation etc.

## Sustainable Farming

### *Uffcott - The Farmer*

The working landscapes of Uffcott shall demonstrate economically practicable, sustainable, organic farming techniques and cycles. These shall encompass both revisioning traditional as well as introducing experimental systems and products. In co-operation with the regional farming community, this farm's production intends to provide healthful foods for local consumption and simultaneously nourish wild flora and fauna along its edges.

To afford the widest range of potential crops, the favorable south-facing slopes of the site have been terraced into large-scale linchets divided by wide ditch and bank, hedgerow and woodland corridors for people, farm animals and equipment and wildlife. These corridors also divert and collect surface water into a series of tertiary treatment collection ponds. Solar, wind or methane pumps carry irrigation to the crops and animals when needed. One pond may contain a fish farm. Once clean, the water is released to recharge the natural ground water pattern. Additional woodland grazing fields are distributed across the site. Here the woodland web contains experimental coppice crops for building material and energy production. All of the fields are configured and scaled for maximum, efficient crop production and to provide large, biologically rich edges for wildlife. In addition to new farm structures and the existing hangers, earthworks and orchards lend definition to working courtyards and gathering spaces for daily and seasonal farm projects, farmers' markets and special events.

## Sustainable Heritage

### *Clouts - The Warden*

The legacy of thousands of years of management, the living artifact of Clout's Wood is a complement the collections on display and stored here. Together with the collection, the landscapes of Sustainable Heritage can demonstrate the connection between human inspiration and invention and the natural world.

The new store is nestled into the sloping, north facing hillside and surrounded by an extension of Clout's Wood. From neighboring vantage points, this woodland intends to soften views of these structures. The adjacent meadow provides a staging area for workshops and special events. An amphitheater located between Sustainable Heritage and Thorney Park accommodates large gatherings.

## Sustainable Living

### *Thorney Park - The Villager*

The landscapes of Thorney Park present the opportunity to re-vision the traditional landscapes of village life - the streets and walks, the green, recreational fields, community gardens, etc. - to provide sustaining environments for residents and models for use elsewhere. New communal landscapes for example a green, a transit center, football and cricket fields, children's playground, other recreational fields and kitchen gardens could be developed on the Creative Planet site while existing landscapes in the village could be renovated over time.

## Sustainable Research and Industry

### *Hackpen - The Magus*

As the primary entry into Creative Planet, a new iconic "smart" structure greets the visitor. This light structure embraces the retrofitted hangers and ancillary buildings and over a series of water and land gardens. This complex houses a transportation hub for site workers, inhabitants and visitors; restaurants, retail shops, information center, guest facilities and major orienting exhibits. This collection of indoor and outdoor gardens will demonstrate landscape designs and planting selection and hybridization intended for specific purposes - sustainable construction, medicine and nutrition, resource conserving abilities of adaptation to drought, poor or shallow soils or ultra violet radiation; abilities of nitrogen fixing, erosion control, low maintenance survival, urban bio-mass or human or livestock food production; etc. The water gardens shall function as part of the climate control of the exterior and interior spaces.

Surrounding and woven through the complex, utilitarian and aesthetic landscapes will demonstrate the sustainable development of urban and suburban sites. These landscapes shall address conditions widely applicable to other locations such as loading and service areas configuration and treatments; water run-off re-cycling; passive and active resource conserving design features and systems; permeable, recycled paving materials; low energy lighting systems; etc.

Here, the woodland web plantings are those that both provide appropriate wildlife habitat and endurance and abilities to thrive and at best, reduce pollution in urban and suburban conditions.

## Sustainable Ethics and Spirituality

### *The Chalk Face - The Scholar*

Built into the knoll at the highest point of the site, the Chalk Face presides over Creative Planet. Just as the philosophical, spiritual ethical, moral realms influence all aspects of life, signature features of the Chalk Face are visible throughout the site. Nevertheless, its structure will be partially built into the hillside. Part architecture, part earthwork this structure will house a conference center, resident and visiting scholars, library and research facilities, lecture halls and the National Center for Belief.

Also partially underground, these landscapes can also illustrate the unseen life found below ground. From the top, a panoramic viewpoint allows visitors to connect this place with the larger world. A series of gardens linked by interpretive walks will express the essential, underlying wonder, beauty and mystery of all life.

## Gardens

An array of gardens and specially crafted places in the landscape in addition to those associated directly with the Knowledge Farms will be developed at various points throughout the site. These Gardens will be complementary to the environments of the Knowledge Farms and will serve as meditations on the great underlying themes of Creative Planet: Humanity's encounter with the awesome power and complexity of nature - with cycles of life and time greater than its own - with paradox and conundrum - and with the fundamental and increasingly critical relationship between creativity and survival. -Mother Nature to Daughter Nature-

All of the Gardens will be highly interactive, involving all the senses, sometimes labyrinthine and physically and intellectually challenging - inviting engagement - perhaps through the use of devices such as a "carbon debit card" issued to visitors upon arrival and as a requirement for the navigation of the site through interactive participation by saving or conserving energy through solving problems or enabling natural processes and cycles.

Complementary on- and off line computer access both on- and off- site real-time and virtual simulations of the site and gardens can be fully integrated into the experience. Alternative actions in the environment could be proposed and modeled - for instance the intended and unintended consequences of the introduction of exotic organisms for fuel or foodstuffs - water plants- or rabbits-

Creative participation could be rewarded with a fine meal, or a chance to go aloft in a new kind of ultra light aircraft or...

# EXHIBITS

## 1. Prevailing Winds and Incident Radiation

- The essentially open site is characterized by its generally windy nature. Prevailing winds are from the south and southwest.

## 2. Existing Landforms

- The present site topography consists of a broad, slightly sloping, open plain described by the intersecting, star-shaped runways overlooked by knoll to the west and overlooking Clout's Wood and the Valley of the Thames to the north.
- The hangers of Sustainable Heritage and Thorney Park share approximately the same finish floor elevation.
- Hackpen is at the lowest point on the site.
- Although soil has been removed from their roofs, the grading undulates considerably around the hangers of Red Barn and Uffcott.

## 3. Proposed Landforms

- By recycling the runway material and using cut and fill, south facing slopes are terraced into large-scale linchets bordered by wide ditch and banks.
- The lake is carved out of the runway fill over the old drainage course. Its water elevation is about a meter below the hangers of Sustainable Heritage and Thorney Park. This elevation allows for a cascade at its northeastern edge towards Coombe Bottom.
- A ditch and bank system contains the transportation systems.
- The Chalk Face elevates the height of the knoll.
- A ditch and bank amphitheater is located between Sustainable Heritage and Thorney Park.

#### 4. Existing Drainage Patterns

- At present all surface water is evaporated, sinks into the soil to recharge the water table or runs off in natural swales.
- One major drainage course moves from the north side of the knoll into Clout's Wood.
- Tracing an old course, water also moves across the runways to the northeast and into Coombe Bottom.

#### 5. Proposed Drainage Patterns

- Surface water is channeled and collected for treatment and reuse at Red Barn, Uffcott and Hackpen.
- Water is collected in the lake and then released to treatment and on to Coombe Bottom.

#### 6. Existing Vegetation

- The primary vegetation across site is grasses and perhaps feed and cereal crops.
- Adjacent Clout's Wood on the north is the most important planting.
- A line of mature trees runs along the edge of the hangers at Uffcott.

#### 7. Proposed Vegetation

- A web of woodland and hedgerows shall provide corridors, screening and microclimate enhancement throughout the project. Its species composition and density will vary according to its environmental and cultural requirements and context
- A great meadow provides open space at the center of the project.
- Wetlands shall support diverse species.
- These infrastructure plantings shall be adapted to thrive within the environmental conditions of this site and region and shall provide habitat for diverse native fauna.

## 8. Proposed Infrastructure and Circulation

- The ellipse loop and circular ring contain the personal and service transportation system within a varying ditch and bank landform.
- This loop and ring may also carry the energy and electronic support systems.
- A service road, following present roadway alignments wherever possible links the outside edges of the project.
- Pedestrian walks and trails, and bicycle-personal powered vehicle paths offer choreographed, experiential journeys throughout the site.