

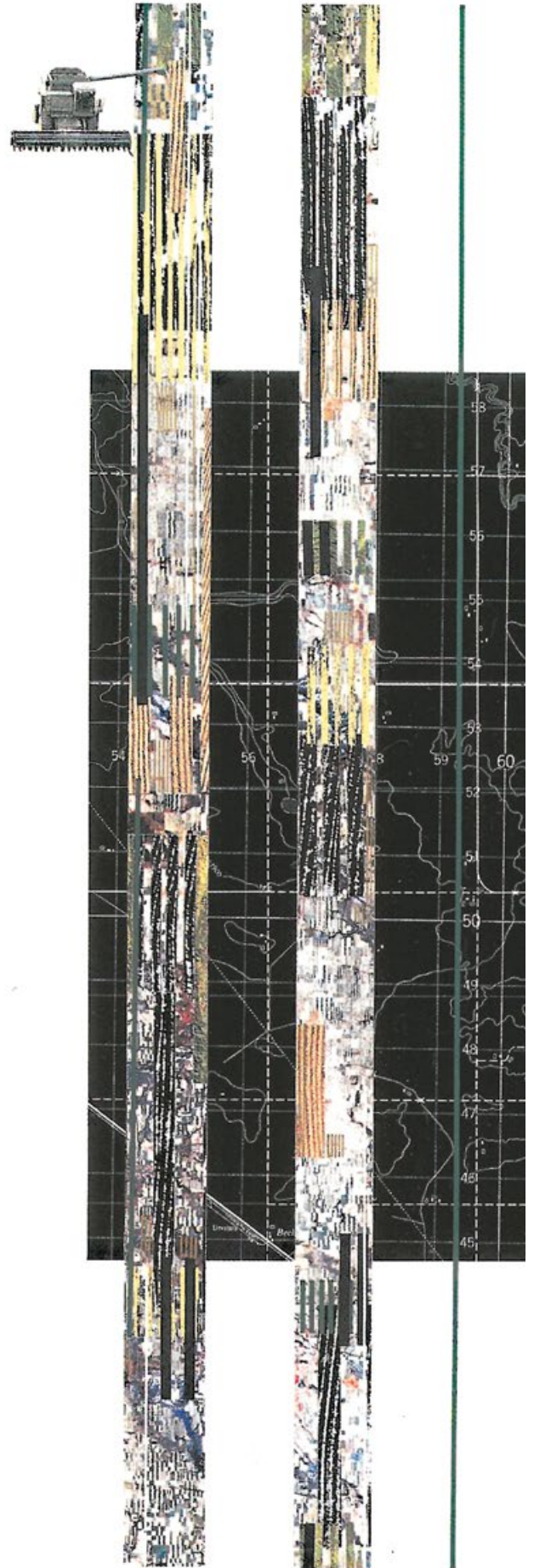
James Corner

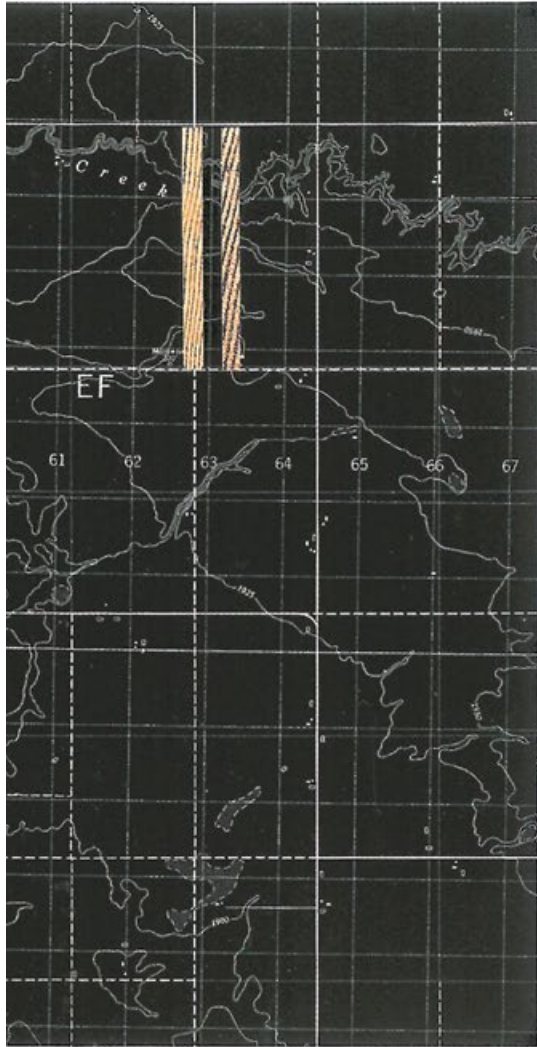
Landscape City

Infrastructure, Natural Systems and City-Making

James Corner,
Dry Farming Strips (map collage),
Montana,
1996

Grids, contours, soils and hydrology determine a seemingly simple yet sophisticated system of strip farming across massive areas of the windswept Northern Plains of the US.





How is current landscape thinking contributing to 21st-century city design? Contrasting new ecological paradigms of resilience with his older work on the American landscape of the mid-1990s, **James Corner**, founding partner of Field Operations, explains the landscape/urban strategy behind the practice's designs for China's Xiongan New Area.

The formal and geometrical patterns of the US landscape are expediently instrumental; they facilitate mobility, interconnection, settlement, agriculture, industry, extraction, development and infrastructure. There is little romance or layering of historical patterns and evolved husbandry, as might be found in the much older landscapes of Europe and the UK – just a youthful stridency, directly functional and straightforward. In 1996, this perspective was the inspiration for the project *Taking Measures Across the American Landscape*, which looked at many different forms, patterns and geometries inscribed across the land as seen from the air to try to understand or explain the rationale behind them.¹ Function, instrumentality, pragmatism and the landscape at work were foregrounded – a technological landscape of free-market economics, capitalism, democracy and eclectic individualism. Low oblique aerial photographs illustrated the scene, while map collages highlighted the kinds of geometries, metrics and techniques used to construct and shape these remarkable landscapes.



Landscape as Infrastructure

Today, nearly two and a half decades later, greater awareness of ecological issues is reshaping the American landscape. Collective concern for climate change, carbon emissions, infrastructure, sustainability and environmental resiliency is leading to new kinds of measures, investment and value in the formation of the landscape. The landscape is urbanising as it gets rewired for the challenges of our time. And, importantly, cities are becoming more like landscapes – not the pastoral landscapes of yesteryear, but the technological landscapes of grids, infrastructures, matrices, webs and working ecologies, all intensely compacted into complex dynamic systems that are being shaped and designed to be more holistic, comprehensive and resilient than ever before.

At first sight, it might not seem particularly convincing to assert that the contemporary city resembles a kind of landscape. Landscape is more popularly thought of as the antithesis of the city, its counterpart, comprised of bucolic countryside and natural areas. Grids, streets, blocks, buildings and freeways are engineered constructions that are quite the opposite of the traditional landscape. There may well be beautiful parks, green waterfronts, squares and gardens that pepper the concrete mass with nature and respite, but the overall urban conglomerate fails to reckon as a singular landscape. Perhaps, at least metaphorically, we might see the city as a kind of geological landscape – stratified, blocky and replete with canyons, pinnacles and promontories – but even this does not seem particularly resonant or useful.

Cities do not 'look' like landscapes, neither in appearance nor material morphology. However, they 'work' like landscapes; their processes, dynamics, interactions and cycles are not unlike landscape ecosystems, layered, temporal and inter-relational. This spatio-temporal perspective underlies the idea of 'landscape urbanism', a way of seeing and acting in the urban field that values time-based interactions and systems over the static space of objects.

Landscape as City

As with ecology and biology, the city can be viewed as a living, working system. The geometrical frameworks that support and facilitate the life of the city also form working landscapes: points, lines, grids, axes, lots, corridors, patches and clusters are as common to landscape as they are to city formation, and these same structures support the various processes of life forms at work.

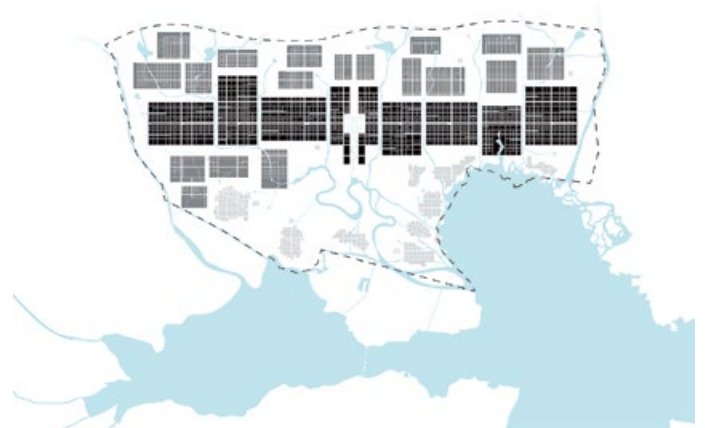
Louis Kahn once famously likened city streets to water systems, where larger expressways and streets are 'rivers', fed by smaller 'streams', in turn fed by 'canals' and 'docks' with parking structures serving as 'harbours'.² These are landscape metaphors speaking more to temporal function than to spatial likeness. Frank Lloyd Wright's unbuilt Broadacre City (1932) painted a mostly green grid mosaic of functioning mixed-use blocks comprising intricate amalgams of

Field Operations,
Xiongan New Area,
Hebei Province,
China,
2018

In this conceptual sketch for a new city of over 200 square kilometres (80 square miles), a porous, lattice-like framework maintains the environmental integrity of natural systems and corridors while framing new enclosures of city, town and village, sited according to density and adjacency to transportation systems.



In Field Operations' proposal, the grid is deployed as the simplest means of organisation, setting up a mobility framework as well as development sectors and blocks



Development plan. The grid allows for maximum connectivity and mobility, while assuming varied dimensions and scales that ensure mixture and texture of building type and programme.

The continuity of the watersheds and water flow systems are coordinated with topography and future development. Water is challenging here because of dry summers and wet monsoon seasons, alternating between drought and flood.



The grid is not continuous or even; instead, it is divided into different areas (or 'towns') with varied scales and different block formats to encourage mixed-use and texture



Open space systems form a massive contiguous fabric, allowing for continuity of ecological systems and flows of matter and energy. The fabric shapes and edges of the various city sectors and neighbourhoods. Much of the landscape system can be more or less naturalised and designed with ecological processes in mind; while areas that are embedded inside the city matrix assume a high level of physical design and programming for social function.

buildings, gardens, urban farms, parks, pedestrian ways, vehicular streets, transit corridors and other city components as if a holistic fabric; a landscape of interacting structures – a city designed for work and self-reliance.³

So perhaps we can at least differentiate between two kinds of urban landscape: first, the familiar green tissue of parks, waterways, squares, gardens, promenades, pathways and public spaces that are so fundamental to local identity, economic value, social equity, recreational amenity, community life, infrastructural resource, ecological function and environmental resiliency; and second, the urban fabric itself, the matrix-like operating system – the composite framework of networks, grids, blocks, interfaces, edges, corridors, passages and other such structures that facilitate movement, flow, interaction, exchange and work.

This double-sided importance of the 'landscape city' – both as green tissue and operating system – is fundamental to environmental sustainability and resiliency in the face of climate change, growth and urban adaptation. Given the rapid environmental and social changes over the last decades, it is clear that cities need to be able to easily adapt to change; they cannot be viewed, managed or designed as rigid, static forms that are unyielding in the face of change. Instead, they need to be as soft and fluid as they are robust and structured. Resilient systems and communities are better able to recover from stress than fixed ones. Suppleness, pliancy, flexibility and adaptability are key aspects of any resilient system.

Xiongan New Area

The work of Field Operations has long been tied to urban issues. One project that best illustrates the above themes of the 'landscape city' is the practice's proposal for a massive new city in China: Xiongan, just west of Beijing. The Xiongan New Area will eventually become the new administrative centre, relieving pressure on Beijing while also providing much-needed new housing, commercial and institutional facilities. At over 200 square kilometres (80 square miles), such a vast development requires a landscape approach to its overall structuring.

In Field Operations' proposal, the grid is deployed as the simplest means of organisation, setting up a mobility framework as well as development sectors and blocks. However, the grid is not continuous or even; instead, it is divided into different areas (or 'towns') with varied scales and different block formats to encourage mixed-use and texture. This mosaic-like arrangement then allows for the various natural systems to surround and flow continuously from the higher land to the lower central agricultural lands and central lake. This blue-green system enables water to be collected and conveyed during the wet season, and retained and managed during the dry season. Tied to the hydrological scheme are various parks, open spaces and recreational amenities for the new city.



Field Operations,
Xiongan New Area,
Hebei Province,
China,
2018

Planned and designed as an operational landscape, the technological frameworks of grids, infrastructures, matrices, webs and working ecologies in Field Operations' proposal for Xiongan are all compacted into intense inter-relational matrices that enable high density combined with open natural systems. The plan integrates green, soft landscapes into the very fabric and infrastructure of the city. This is less a city of objects and more a city of movement, flow, exchange and evolving potential.



The same dialogue between ecological matrix and urban development also scales to each main sector, or district. The key aim is to provide a simple operating system for all urban and environmental processes so that the city can be constructed by myriad developers and agencies over time in a relatively coherent and beneficial manner, with a primary emphasis on a sustainable, resilient and humanistic urban form.

The Xiongan proposal serves as a useful suggestion for how landscape sensibilities can help to inform city building, masterplanning and a more humanistic approach to the design of large-scale multidisciplinary projects. Landscape today continues to embrace countryside and green parks, but has also morphed into the operating system and tissue that undergird urban fabric and its capacity to recover from unforeseen stress and damage. Landscape has become integrally urban, fundamental and crucial to city resilience. Urban planning and design need to better reconcile environmental green systems with urban development, transit mobility and economic models all at the same time. No more silos in terms of professional turf; the city needs to be shaped holistically, conceived and constructed as a total landscape city, an integrated hard and soft weft, an absorptive and facilitative tissue, a porous fabric both yielding and protecting, adapting and evolving in time. The landscape city is a living organism, at once highly efficient, ingenious and beautiful in its transformation and effects.⁴ ▹

Notes

1. James Corner and Alex MacLean, *Taking Measures Across the American Landscape*, Yale University Press (New Haven, CT and London), 1996.
2. Louis Kahn, 'Philadelphia City Planning: Traffic Studies', City of Philadelphia, 1951–3. Drawings and Notes in the Louis I Kahn Collection, Architectural Archives at the University of Pennsylvania, Philadelphia.
3. Frank Lloyd Wright, *The Disappearing City*, WF Payson (New York), 1932.
4. See James Corner, 'Eidetic Operations' and 'Landscape Urbanism', in James Corner and Alison Bick Hirsch (eds), *The Landscape Imagination*, Princeton Architectural Press (New York), 2014, pp 241–56, 291–7.

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