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LANDSCAPE ORIENTED URBAN DESIGN STRATEGIES

INTRODUCTION

This presentation is set into the contemporary discourse of landscape which has shifted during the twentieth century from being considered as just a scene to a dynamic system undergoing processes. Landscape evolves from the pictorial to the instrumental, operational and strategic. This dynamic condition gives it the ability to create itself and can be introduced into the basis of landscape design. This shift emphasises the interactions between natural, cultural, economic and social processes, and landscape can be characterised both spatially and temporally.

The transformation of these processes is an inspiration and a model for the new urban condition. Projects that reflect the emerging trend of orienting urban form through the landscape will be reviewed. We will also look at urban expansion and renewal projects that incorporate this approach and become instigators of a set of interrelated dynamics between the social, the economic, the ecological and the cultural. This specificity enables the landscape to articulate with the urban, and through its dynamic to understand how cities are formed, are revitalised and evolve over time.

“LANDSCAPE ORIENTED” URBAN PROJECTS

The projects reviewed have been selected because they include ecological processes and landscape strategies at the first stages of new urban form and demonstrate their ability to create urban development. All the examples represent the current practice of landscape architecture in different parts of the world and meet the following requirements:

- They include a variety of different types and forms of urban landscapes: open spaces, urban regeneration, urban expansion areas, and new residential developments.
- They include different scales of urban

landscapes: regional scale, city scale and neighbourhood scale.

- They cover all types of land uses, including residential, commercial, industrial and recreational.
- They have different locations: urbanised consolidated areas, peri-urban fringe areas, or areas outside the urban edge.

The projects selected are included in the following table:

teams were asked to produce a compelling concept for the Lower Don Lands with the river as the central feature, while at the same time providing for new development and new linkages to the rest of the city, using the following key principles to guide their designs:

- Naturalise the mouth of the Don River
- Create a continuous riverfront park system
- Provide for harmonious new development
- Connect waterfront neighbourhoods

Project	Place	Country	Authors	Scale	Occupation pattern	Natural features	Local character
Lower Don Lands	Toronto	Canada	Michael Van Valkenburgh Associates Inc. (MVVA)	Local (300 km ²)	Urban regeneration, new developments	River estuary	Infrastructure and post-industrial landscape
Water City, Qianhai	Shenzhen	China	James Corner (Field Operations)	Regional (1900 ha)	New developments	Water system, soil and drainage, flat topography, marshes	New urban landscape
Confluence district	Lyon	France	Michel Desvigne	Urban (150 ha)	Postindustrial urban regeneration	Savone and Rhone rivers	Postindustrial
Water City, Vathorst	Amersfoort	The Netherlands	Aadrian Geuz (West8)	Urban (560 ha)	New development - Vinex Plan	Lake Iselmeer	Traditional Dutch water towns

Lower Don Lands, Toronto, Canada

Major world cities such as Toronto are in transition and many need to integrate post-industrial landscapes while also radically reframing their interactions with the natural environment. The Lower Don Lands project is unique among these efforts by virtue of its size, scope, and complexity.

In 2007, Waterfront Toronto, with the support of the City of Toronto, launched an international juried design competition to determine a master vision to tackle the challenge of redeveloping the Lower Don Lands. The goal of the competition was to produce a unifying and inspiring concept for merging the natural and urban fabric into a green, integrated and sustainable community. The design

- Prioritise public transit
- Humanise the existing infrastructure
- Expand opportunities for interaction with the water
- Promote sustainable development.

1. Lower Don Lands.
Courtesy of MVVA, Inc



The office of Michael Van Valkenburgh Associates (MVVA Inc.) won the competition. In the MVVA team's design, the engine of transformative urbanism is a dramatic repositioning of natural systems, landscape systems, transportation systems, and architectural environments. A renewed recognition of the functional and experiential benefits of river ecology enables a sustainable approach to flood control and river hydrology to become the symbolic and literal centre around which a new neighbourhood can be constructed.

This master plan brings together transformative landscape methodologies with innovative scientific approaches to natural reclamation and makes them operational at the scale of the city and the regional ecology. Within its plan to recycle 115 hectares of Toronto's waterfront, the Port Lands Estuary project unites the client's major programmatic initiatives into a single framework for the study area that will simultaneously make the site more natural (with the potential for new site ecologies based on the size and complexity of the river mouth landscape) and more urban (with the development of a green residential district and its integration into an ever-expanding network of infrastructure and use).

Both the urban and the natural elements of the landscape are seen as having the potential to introduce complex new systems to the site that will evolve over the course of many years, and give form and character to the development of the neighbourhood.

Water City, Qianhai, Shenzhen, China

The Qianhai Water City site includes a 1.900 ha of reclaimed land surrounding the Qianhai Harbor, on the western coast of Shenzhen, at a key point of the Pearl River Delta. The area has exceptionally poor water quality. Upon implementation, Qianhai is envisioned

to be the financial, logistics and service hub of Shenzhen, and a major new urban centre in the Pearl River Delta mega-region, linking Hong Kong to Shenzhen and Guangzhou.

Landscape Architect James Corner and his office Field Operations envision a new "Water City" for 1.5 million people. A new and vibrant 21st century city: dense, compact, mixed, sustainable and centred around the area's most important resource – water.



2. Qianhai Water City Masterplan.

Courtesy of: Field Operations

The great opportunity is the occasion to embrace the water as the defining feature of the landscape's identity.

This watery identity is an approach to processing, remediating and enhancing the water on the site and in the harbour that is environmentally innovative, while simultaneously generating a wide range of watery urban environments throughout the territory's 18 square kilometres. (18km²). Shenzhen should aspire to create a waterfront city that rivals Hong Kong, Sydney and Vancouver in its quality, character and globally recognisable physical, economic and cultural identity.

Given this aspiration, the successful planning proposal for Qianhai cannot have a conventional planning that privileges buildings over landscape, or infrastructure over ecology. Rather, the successful urban plan must outline a strategy that synthesises these systems in order to create a robust and resilient urban matrix capable of continuous adaptation, transformation and revision.

This design proposal achieves this synthesis in a creative and realisable way. The proposal breaks down the massive territory of the site into five manageable development sub-districts through the introduction of five Water Fingers that extend along the line of the existing rivers and channels. These fingers hybridise an innovative hydrological infrastructure and an iconic public realm, serving to process and remediate on site water. It also expands the amount of development frontage and creates a series of public open spaces that structure and organises the development of the overall Qianhai area.

The urban fabric within each development sub-district takes the scale of the typical Shenzhen block, but breaks it down further through the introduction of a tertiary network of roadways and open space corridors in order to promote pedestrian movement, avoid the isolation of the super-block format, and generate diverse range of urban neighbourhoods within each sub-district.

The result is a hyper-dense, ecologically sensitive urban landscape that offers an iconic waterfront, diverse building stock, cultural and recreational destinations, as well as a series of public open spaces that are all easily accessible from any point within Qianhai.

The “water-finger” landscapes remediate on-site water. A network of large-scale filtration landscapes will purify water. There is a strong relationship between the wet landscape and the green open spaces.



3. Water fingers.

Courtesy of: Field
Operations

Confluence District, Lyon, France

Today one of the biggest urban development projects in Europe is being carried out in Lyon, in the Confluence of the rivers Rhône and Saône. The city centre of Lyon will be doubled using 150 hectares of industrial area, with high quality architecture, and landscape architecture in terms of urban planning. This area is the southern tip of Lyon's central peninsula, long devoted to manufacturing and transport. Reclaimed from the waters in past centuries, this riverside site is re-embracing its banks and natural environment. The redevelopment is gradually highlighting an outstanding location and unique landscapes. Only a few years ago it was little more than a neglected wasteland. Instead, a neighbourhood for living in and sharing is being built. This new urban development consists of two phases:

Phase One (In French: ZAC1) is four hundred thousand square meters (400,000m²) of new buildings in 41 hectares, distributed as follows:

Confluence District, Lyon		
	Phase 1	Phase 2
Total area	400,000 m ²	420,000 m ²
Housing	145,000 m ²	140,000 m ²
Retail	130,000 m ²	230,000 m ²
Hotels and shopping	95,000 m ²	15,000 m ²
Recreation	30,000 m ²	35,000 m ²

It stands around centre pieces, such as the Place Nautique, the Saône Park, the Place des Archives and the Retail and Leisure Cluster. This Phase One will also continue with the conversion of the old Rambaud Port buildings - La Sucrière, Les Salins and the Espace Group complex- into recreational, cultural and business buildings.

Phase Two of the Lyon Confluence urban project (In French: ZAC 2) was master-planned by Herzog & de Meuron together with landscape architect Michel Desvigne. It is 420,000 m² of new buildings in 35 hectares, distributed as shown above in Figure 1. Around 30% of the existing market buildings will be conserved. Phase Two features three new bridges: Pont Raymond Barre for the extended tramway; Pont des Girondins to connect Lyon Confluence and Gerland (on the Rhône's east bank) and La Transversale, a straight route for pedestrian travel, including two footbridges over the Rhône and the Saône.

As opposed to rigid and inflexible redevelopment plans, Francois Grether (architect and planner) and Michel

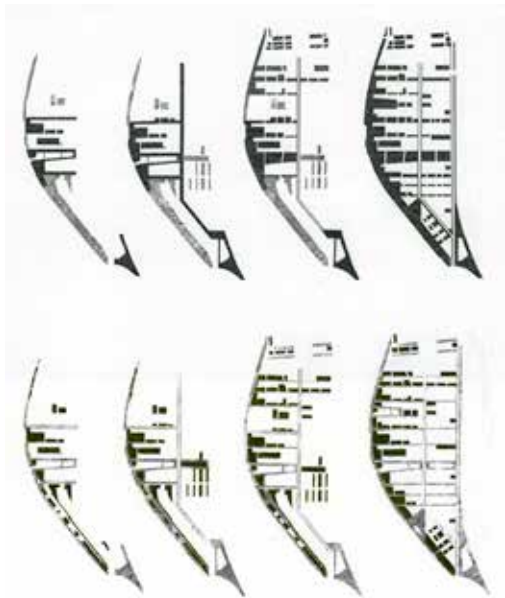
Desvigne (landscape architect) have devised a “strategy of infiltration” for the Confluence District in Lyon. It is a flexible occupation, as parcels become available for new programmes, structured by a “dispersed and mobile” system of parks.

During the 30-year transformation process, all exterior land will be a park at one time or another, either provisionally or for the more long term. As Michel Desvigne says:

“We are not envisaging a hypothetical, definitive state but a succession of states that correspond to the different stages of the metamorphosis. Exterior areas will be born, disappear, shift, according to the evolution of the building and the rhythm of the freeing of land, to make up a sort of moving gap, like that of crop rotation”.

All of the buildings of the Confluence District are directly related to the park system and every inhabitant will have a relationship with a garden or walk. A network of walks and gardens weaves between new blocks throughout the southern end of the peninsula. The phasing of the project depends on the different industrial parcels being available for new development at different periods, led to the natural evolution of a “two speed” landscape. Temporary and perennial elements could be staged on the territory. Temporary features instantly enhance the site’s public perception: meadows of flowers, tree nurseries, and a 2.5 km park as the spinal cord of the park system along the Saone. The perennial elements, such as lines and clusters of trees, infrastructure and buildings progressively define the projected spatial configuration.

Water also plays an important role in the project; its organisation corresponds with the pedestrian walkways. The port along the Saone is redefined and several large basins prefigured by temporary gardens will be built towards the



4. Lyon Confluence Masterplan.
Michel Desvigne Paysagiste

district interior. New waterways are established parallel to the rivers, providing protection against the strong tidal variations of the rivers. The new waterways are filled by recuperating water with a system of channels, drains and pools within the park network. New flora is establishing itself in the protected ecosystem. The rainwater recuperation is also phased, allowing certain lots to serve as temporary retention basins. The hydraulic mechanisms determine, to a certain degree, the design of the park.

Vathorst, Amersfoort, The Netherlands

In 1995, WEST 8 developed the Master Plan for Amersfoort with a programme that consisted of 10,000 homes for 30,000 to 40,000 inhabitants. Adrian Geuze is the principal of the office WEST8 of landscape architecture and urban design, in Rotterdam. He is one of the creators of large urban transformation projects (Among them, the Madrid RIO Project).

This project comes under the Vinex Plan, which has proved to be a smart strategy that has accumulated some interesting new urban developments, with high quality architecture and careful treatment of the landscape. Amersfoort is a city located on the banks of the river Eem, in the central region of the Netherlands. With 135,000 inhabitants, it is the second city of the region in size, after Utrecht.

The new developments in Vathorst and the Water City are an example of the efforts made by the design team since the initial proposals to avoid tabula rasa. The intention is to build a new urban growth in a periphery without previous references, avoiding the homogenisation and mono-functionality of the suburban landscape. In this case the landscape of the site becomes the main concept idea of the project. The shape and character of the project is derived from the

landscape structures and inherited attributes of the site and its surrounding territory. It is a high density housing area (65 inhabitants/ha) designed in the tradition of the Old Dutch canal cities, with a water connection to the IJsselmeer Sea.

The master plan is for 11,000 dwellings, 90 hectares of commercial, industrial and office programmes and required public facilities. It is divided into four zones:

- A concentration of industry, commercial and office programme at the junction of national infrastructure (railways and motorways).
- A low-density urbanisation respecting the existing rural landscape with tree lines
- A high-density cluster around a clean water basin
- Urban morphology is recreated by the traditional Dutch landscape and the water channelled towns.



5. Vathorst Masterplan
Courtesy of West 8



**6. Aerial View of
The Water City,
Vathorst**

Courtesy of West 8

In the Water City masterplan, a new network of channels is designed, connecting with the IJsselmeer and inspired by traditional bridges: high, so that ships can pass underneath. It looks for an individual housing typology reminiscent of traditional single Dutch houses, narrow and high, of different heights and colour of stone or brick. The low houses can also be considered as a free interpretation of the traditional Dutch house with canal frontage, reformulated here as house-yard.

CONCLUSIONS AND DISCUSSION

In the projects reviewed, we see a trend where urban growth does not simply expand on the surrounding territory, but rather transforms

it so that it can reintegrate into the cycles of nature and cultural background of the place.

Landscape architecture projects that interpret the landscape as a complex dynamic system can enhance a set of interrelated dynamics: social, economic, ecological, cultural and infrastructural. We also note that the landscape is a medium that can:

- Read and understand the complexity of the territory
- Act at different scales and transcend administrative boundaries;
- Recognise historical and cultural values and retrofit them with a contemporary logic;
- Accommodate the different needs of land uses at different scales;

- Act at different cross-sectorial issues
- Be the bearer of the processes that move between society and space.

We have seen projects emerging where regional and urban development goals are expressed by landscape strategies, based on the specific features and characteristics of places and where the dialogue Ecology – Landscape - Urbanity gives identity to the territory.

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