

Breathing and Living Wall

墙体花园设计

深圳市艺力文化发展有限公司 编



华南理工大学出版社
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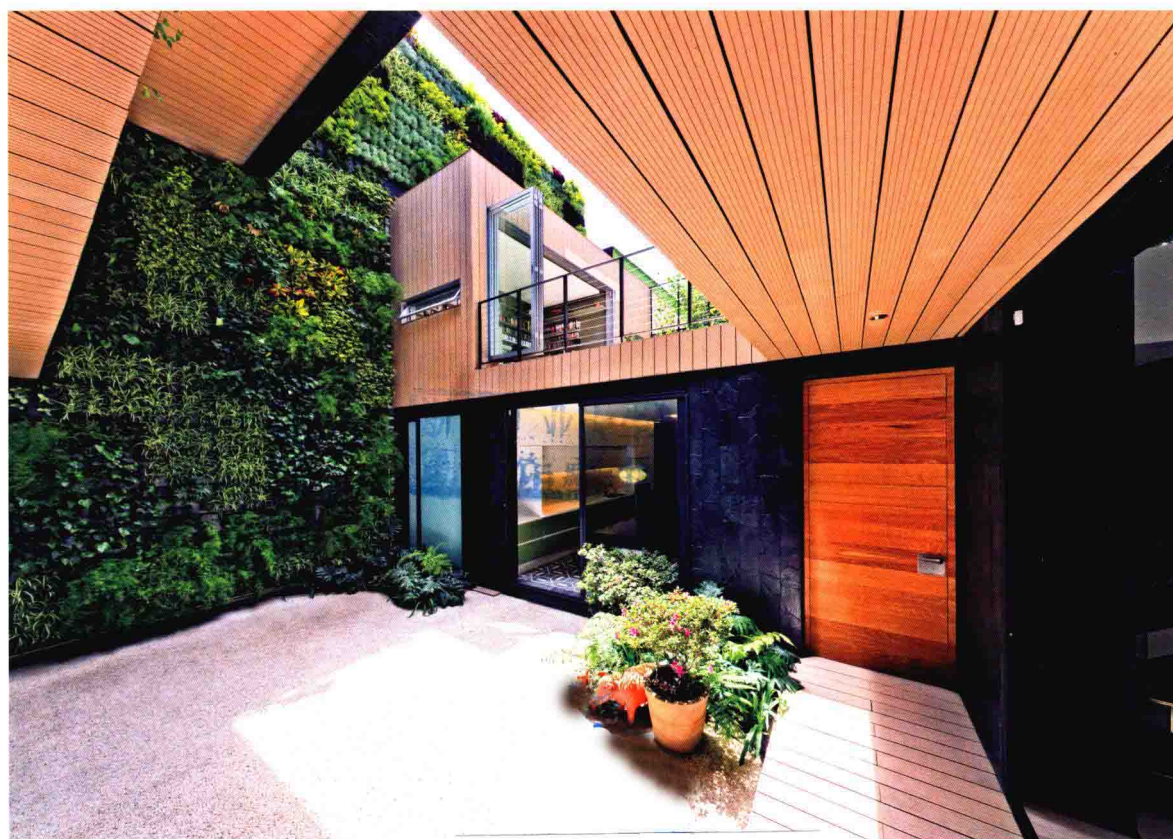


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PREFACE

序言

The Vertical Gardens are here to stay, but it is very important to propose them from knowledge of plants and their physiological requirements and the different gradients that might be present in the same place.

The wonderful paradox of a future that is back to something primal, makes us dream; the life surrounded by plants. Fortunately, we, the human species, simian that inhabit the human ecosystem, are realizing the obvious, that our lives are empty and absurd if we aren't surrounded by nature. And for this, the new revolution, the eco-revolution, does not conceive full life in the asepsis of being girded by bare walls in the vortex of the most brutal consumerism.

In this wonderful edition of *Breathing and Living Wall*, is shown in color some of the more relevant projects worldwide, in which the eco-revolutionaries have given their all in their projects. Some of them are really complex in its execution and very thoughtful, some other are simpler and delightful and even some are ephemeral.

One might say then, that special attention should be paid to the experience of the specialists and no least important to the system to be used for every occasion. Not only we have to see how nice they seem once completed, but also the time those systems will secure the life they carry, and the respect and knowledge that the expert must put along with their demonstrable experience in their technique to make the project viable.

There is however one crucial point to be taken very seriously, we have to be very careful with the failures, because it affects everyone; the ones that developed the system, the architect of the property and even the introduction of the vertical gardens in future projects. This is why everyone must be very clear that the price and the ones which struggles

墙体花园已然常见，但要设计这些花园，极为重要的是，了解植物及其生理需求以及环境梯度变化。因为即使在相同的区域，也可能呈现不同的梯度。

未来回归于原始。这一奇妙悖论，使我们开始憧憬被植物环抱的生活。幸运的是，我们，人类物种，居住在人类生态体系的猿人，开始清楚地意识到，如果不被自然环抱，那么我们的生活注定空洞和荒诞。正因如此，这场新变革，这场生态变革所构想的，绝非是在野蛮的消费主义漩涡中，空空墙壁包围着的无菌生活。

这本精彩纷呈的《墙体花园设计》，以彩色印刷展现了世界范围内的相关项目，一个个项目本身即是一次次生态变革。它们之中，有些施工复杂、考虑全面；有些相对简单、赏心悦目；有些甚至只是昙花一现。

不免有人提出，必须重视专家经验，使用适应性强的生态系统。因为，我们不仅要看到它们完工时的美丽景象，也要保证这些系统能够维持它们承载的生命，并且借助专家在技术上的可论证经验，使项目切实可行。

然而，有一点至关重要，不容忽视，那就是我们要认真对待失败。因为它影响到我们每一个人，包括该系统的研发者和项目的建筑者，甚至影响到墙体花园运用于未来项目的前景。正因如此，每一个人都

for who is the cheapest, are swampy and full of traps in small prints, that hinders the path of success for Vertical Gardens. Either way, it is always valuable to incorporate these systems into our gray cities environment considering the above.

I trust in the potential to include green design elements, which is why architects and designers should be ahead and share our vision. It is true that in the embodiment of vertical gardens, the design, the artistic and functionality are the basics; but perhaps, solely seeing in that way, might prove to be selfish. It is the job of the inhabitants of this world, unfortunately individualist, to become aware in making available the nature to the rest of his kind, popularizing and making the Living Walls accessible and not elitist. It would be absurd that only have green design in the high profile buildings; in the same way that we found abhorrent any social difference; but disastrously, they exist.

Thankfully, nature is back, as long as we allow it; indeed there is much to do, and Vertical Gardens are not the magical cure to the ills that plague the planet or anything, but it's a tiny bit in the right path and above all, the opportunity to reflect, refresh and envision the future standing in front of some of the wonders that are present in *Breathing and Living Wall*.

Each and every one of us has the opportunity to leave a trace; the fact that we inherited a sick world does not give us the right to handing it over to the future generations.

Ignacio Solano Cabello
Founding director of Paisajismo Urbano
Developer of the Vertical Ecosystem

必须清楚项目造价，也必须清楚，若是想方设法压低造价，必然埋下潜在隐患，阻碍墙体花园的发展之路。无论怎样，综合以上考虑，将这些生态系统引入我们灰色单调的城市环境，始终是极有价值的。

我相信绿色设计元素的发展潜力，因此也希望建筑者和设计者们敢为人先，支持我们的构想。诚然，墙体花园最终成型，其设计、艺术性以及功能性是基本要素；但是，如果只是目及于此，不免显得眼光短浅。事实上，它关乎到这个地球上的所有居住者，而不幸的个人主义者，应该懂得将自然带给他们的同伴，使墙体花园得到普及，而不是供精英者观赏。如果绿色设计仅为高端建筑所独有，那就太荒诞了，与其他的社会差异一样令人厌恶。可悲的是，这种现象确实存在。

幸好，只要我们愿意，我们可以回归自然。我们要做的有很多，墙体花园不是治愈地球创伤的灵丹，只是迈向正确道路上的一丝努力，而重要的是，《墙体花园设计》所展现的某些惊艳之作，将有可能预见并构筑未来。

我们每一个人，都将留下自己的痕迹。我们从前手中接过一个受伤的地球，不代表我们就有权利，也将这个受伤的地球交给后人。

Ignacio Solano Cabello
Paisajismo Urbano 创始董事
垂直生态系统开发者

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Chamber of Commerce and Industry

工商业协会

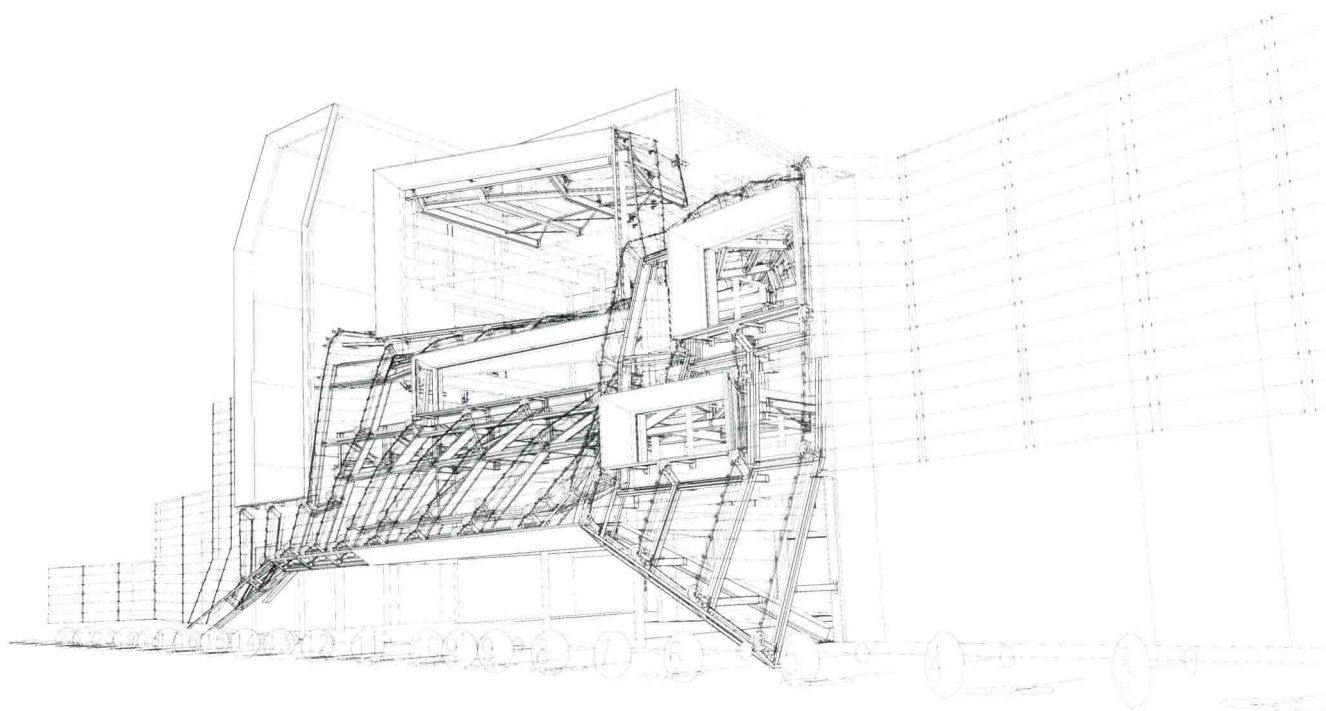
Design Agency
Chartier-Corbasson Architectes

Client
CCI de Picardie

Location
Amiens, France

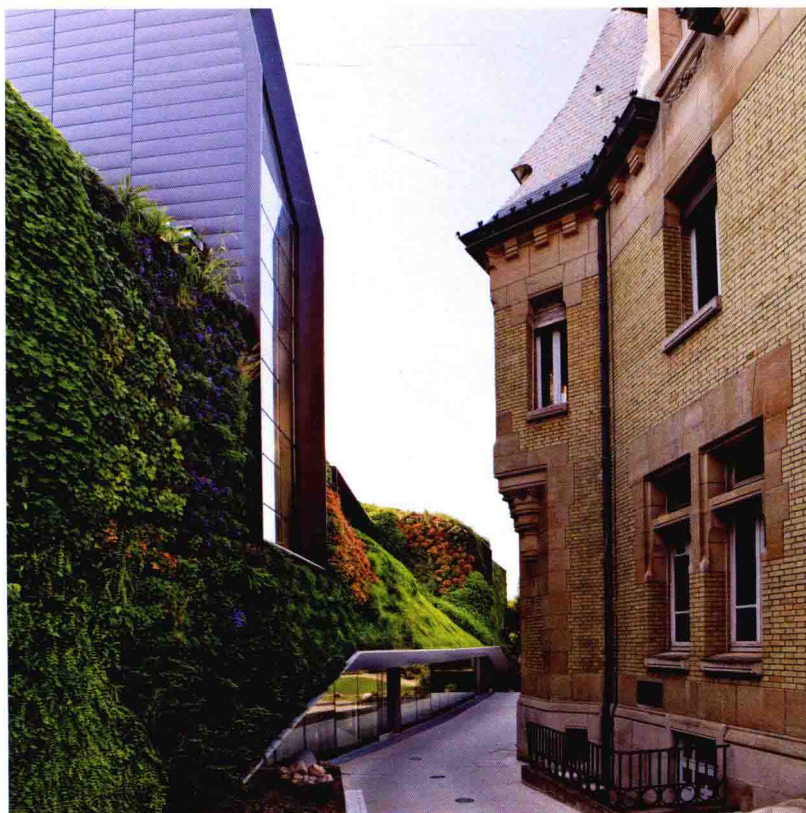
Area
1,800 m²

Photography
R. Meffre & Y. Marchand



The Bouctot-Vagniez Town Hall in Amiens is a remarkable building, an architectural testament to the glories of Art Nouveau in nineteen-twenties. Our project is concerned with designing an extension to this unique building, which is home to the Picardy Regional Chamber of Commerce and Industry.

All the essential features of the project are represented in a plinth of living greenery that creates a link between the new wing, the existing premises and the gardens. The offices will be situated above this greenery plinth. They are housed in two separate spaces divided from one another by an atrium that will allow natural light and air to penetrate





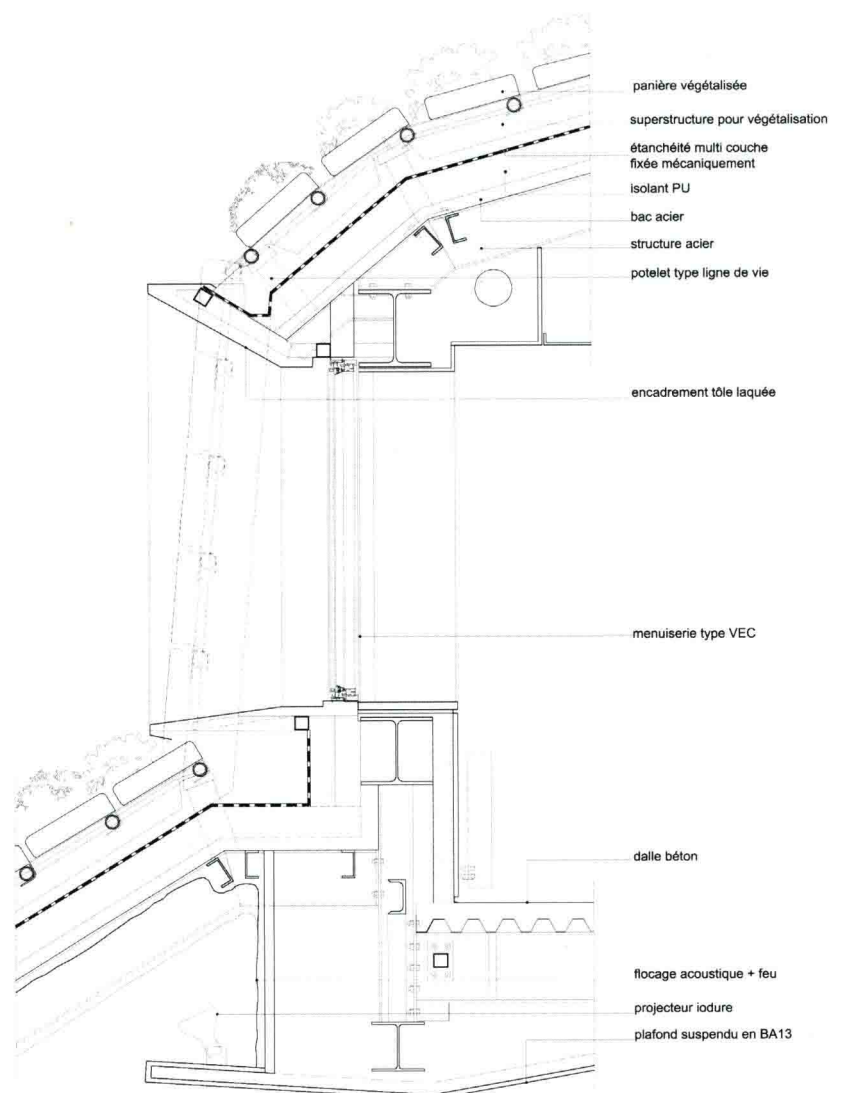
the heart of the building. Screen-printing technology protects certain perspectives by shading the glazed areas or leaving them clear, according to the needs created by the utilisation of the rooms behind. To the south, on the roadside elevation, a double skin of metal mesh allows for ventilation and creates a sunscreen, creating a secluded atmosphere in the offices.

As regards the garden elevation, the design forms part of the existing landscaping as a sort of kink in the boundary wall. The hall opens out as broadly as possible onto the gardens, and the ground floor rises up to embrace a wide panoramic bay window creating a fluid, light-filled space.

Bouctot-Vagniez 市政厅是法国亚眠市一座标志性建筑，是 20 世纪 20 年代新艺术风格运动的见证。它是皮卡第地区工商业协会的所在地，本案是这座独特建筑的扩建。

本项目的所有关键特征，都体现于它充满绿意的生态柱基。柱基将扩建部分、旧建筑和花园连接起来。办公空间建于生态柱基之上，并以中庭为界，分隔为两部分，将自然光线和空气引入建筑内部。设计中采用了丝网印刷技术，可以根据空间的不同功能，进行不同的视觉遮蔽处理。南面临街处，设置了通风防晒的双层金属网，为办公室营造幽静的氛围。

至于花园的高度，设计中部分现有景观与围墙和谐对应。厅门正对花园，并且最大化地敞开。底层进行了抬高设计，以建造一个能够看到海湾全景的窗户，创造一个流动的、充满光照的空间。



House in Travessa Do Patrocínio

特拉瓦萨·多·巴特伦西尼奥住宅

Design Agency

RA \ ARCHITECTURAL & DESIGN STUDIO

Architects

Luís Rebelo de Andrade, Tiago Rebelo de Andrade & Manuel Cachão Tojal

Co-Workers

Madalena Rebelo de Andrade, Raquel Jorge, Carlos Ruas & Tiago Moniz

Client

BWA — Buildings With Art

Location

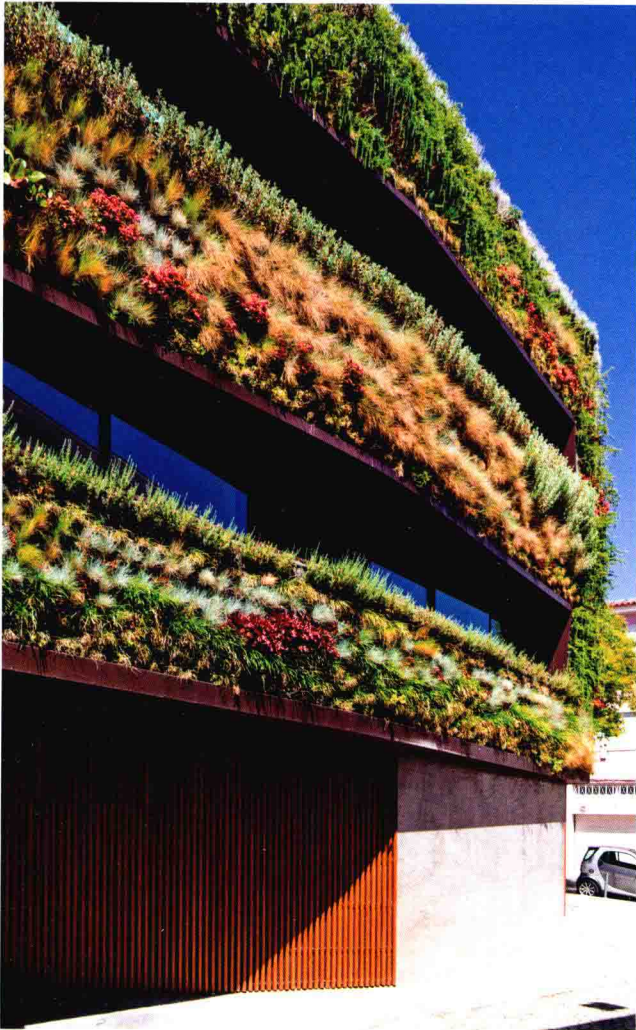
Lisbon, Portugal

Area

248 m²

Photography

FG+SG — Fernando Guerra, Sergio Guerra



From a small lot with its unique implantation, this project has raised early on a couple of challenges... and along with them, ideas emerged.

The box housing deviates from the gable to create a vertical yard (glass box), with a straight ladder connecting all floors, an allusion to the famous stairs of Alfama, running between the all 4 floors walls and linking the various dimensions.

This courtyard is the heart of the house, bringing light to the interior, enhancing the main entrance

and creating a real exterior/interior relationship.

In terms of material, we chose to polish the rectangular form and gave the block the face of a tree, making it one more element of the square, which resulted together with the existing tree and water fountain, in a triad.

The program was set up almost automatically, the technical services and garage with direct access from the street. The first floor holds the private area of the house, the second floor is the social area,



with a direct connection to the coverage, extending social into outdoors, being the view related to the social side and the private area to both square and embassy, the setting of a typical Lisbon experience, which is a truly intimate relationship between quarters.

Therefore, this project is in fact a mini lung and

该项目的面积虽小，但是却有许多独特的植物。设计师早期面临了许多挑战，但也萌生了一些新想法。

这栋倚着一面山墙修建的四层住宅有着玻璃箱一样的外形，内部以受阿尔法马著名楼梯启示而设计的直跑梯联系起室内所有的空间。

庭院是房子的核心，为室内带来光亮，使得主入口更美观，真正地把室内和室外联系起来。

设计师在材料上对建筑的长方形外层进行抛

an example of sustainability for the city of Lisbon, keeping the principles of a living typical habitat and a relationship with the outside, assuming a revitalizing urban role.

Its walls are completely covered with vegetation, creating a vertical garden, filled with around 4, 500 plants from 25 different Iberian and Mediterranean

光处理，并使大厦正对树而建，为广场又增添了新的元素，它和现有的树木、喷泉一起，成为这里的三个要素。

设施几乎是全自动化的，一些技术设施和车库直接连接街道。一楼是私人区域；二楼是社交场所，与外界直接相连，把社交延伸至户外。它可被视为一大公共景点，但同时也是广场和大使馆中的一个私人区域。它的不同区域之间有着紧密的联系，可谓里斯本城市建设的典型。

varieties which occupies 100 square meters. So, short levels of water consumption are guaranteed as well as little gardening challenges. Different fragrance are spread throughout the 4 floors. For example, in the swimming pool you will have the flavor of saffron, in the bedroom, lavender, in the living-room, rosemary.

Implemented in the heart of a busy city, the vertical garden creates a unique link with nature and an unexpected atmosphere.

因而，该项目实际上充当了城市的“迷你肺”，它是里斯本城市可持续发展的范本，既遵守特有的生活习惯准则，又维持着和户外之间的关系，能起到振兴城镇的作用。

被植物覆盖的外墙面积达到 100 平方米，使用了 25 种伊比利亚半岛和地中海植物，共计 4 500 株，犹如一个墙体花园。维护这样的园艺只需喷洒少量的水。整个建筑弥漫着迷人的香味。在户外泳池区，散发着藏红花的味道；卧室里散发薰衣草的清香；客厅则使人沉浸在迷迭香的魅力中。

在繁忙的市中心，这个墙体花园保持与自然的独特联系，营造出绝佳的氛围。



IDEO Morph 38

IDEO Morph 38 高层公寓

Design Agency
Somdoon Architects

Designer
Punpong Wiwatkul, Puiphai
Khunawat

Landscape Architect
Shma Company Limited

Location
Bangkok, Thailand

Area
3,102 m²

Photography
W Workspace, Somdoon
Architects

The scheme is located away from the high density and congestion of Sukhumvit road and into a blissfully green low-rise residential area. The development has been separated into two towers to maximize plot ratio, and each building targets to different potential tenants in character.

The two towers are visually interconnected through a folding "Tree Bark" envelope that wraps around from the 32-storey rear tower (Ashton) and 10 duplex-storey front tower (Skyle). This outer skin is a combination of precast concrete panels, expanded meshes and planters. The functions of the skin varies from being sun shading devices to covering air condensing units. The bark on the west and east side strategically becomes green walls, in accordance to the tropic sun's orientation. The height of this wall is 65 m on the front tower and 130 m on the rear tower respectively, providing the residences and neighbors with a comfortable visual and natural environment.

Skyle is targeted for singles or young couples with the smallest unit footprint being 23.3 m². These duplex units are expressed vertically with variation

of balconies and air condensing units.

In contrast, Ashton emphasizes on the horizontal and cantilevered spaces which are targeted to families. The units' sizes and types vary from a single bed with a reading room, to duplex units with a private swimming pool and a garden on the 8th floor, and a four bed duplex penthouse at top level. A 2.4-m cantilevered living space projects from each unit on the North side. This is made up of a glazing enclosure on three sides providing the maximum view. Each unit on the south has a semi-outdoor balcony which is flexible in space. The double layer of sliding windows allow for a transition between a conventional balcony to an extended indoor living area.

The IDEO Morph 38 is a high rise building which is located in stark contrast to the low-rise residential context. The project takes on a symbiotic relationship with the environment. Due to its sensitive design language and the green populated facade, the buildings have a natural aesthetic, making them a landmark and a pleasant environment for the neighbors and the city.



项目远离人口密集而拥堵的曼谷素坤逸路段，坐落于一个楼层较低、绿化良好的居民区内。项目分为两座塔楼，扩大了容积率，每栋高楼旨在满足不同潜在住户的需求。

在视觉上，两座塔楼通过重叠的树木相连接，绿树环绕着32层高的后楼（Ashton）和10层高的复式前楼（Skyle）。建筑外层表皮由预制混凝土板、扩张金属网和种植器皿组成。这些组成成分的功能有所差别，分别起到覆盖遮阳设备和空气冷凝机组的作用。西侧和东侧是绿色的墙壁，面向热带阳光的方向。两面墙的高度分别是65米（前楼）和130米（后楼），为住户提供了舒适的视觉环境和自然环境。

前楼 Skyle 面向单身人士和年轻夫妇，最小的公寓面积是单层 23.3 平方米。这些复式公寓均通过不同种类的阳台和空调冷凝机组设置制造出丰富的垂直视觉。

相比之下，后楼 Ashton 强调水平和悬吊式空间，从而有针对性地面向人口较多的家庭。单元尺寸和类型各不相同，包括小两室（书房加卧室）、8 楼带私人泳池和花园的复式公寓、顶层四室复式公寓。每个单元北面都有一个 2.4 米高的悬臂式起居空间。这个封闭空间的三面都是玻璃墙，视野绝佳。南面每个单元都有一个半露天的阳台，这是一个灵活的空间，双层推拉窗可以使其从一个传统的阳台转变成延伸的室外起居空间。

IDEO Morph 38 高层公寓作为一个高层建筑项目，与周边低层的住宅建筑形成了鲜明的对比。该项目与环境有着共生的关系。由于采用了新颖的设计语言和茂密的植物墙，建筑有一种天然的美感，使它不但成为地标性建筑，还为周边居民和城市提供了一个令人愉悦的环境。





Casa CorManca

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