1. 随着项目一期工程的建设，游客可以沿着环岛游道漫步、骑行，或进行其他户外活动。

1. Following the completion of the project's first phase, visitors can walk and bike along a looping path and enjoy activities in nature.

1 © Steve Hall / Hedrich Blessing

创建生态的城市栖息地 ——芝加哥北岛公园

CREATING AN ECOLOGICAL URBAN HABITAT AT NORTHERLY ISLAND IN CHICAGO

Studio Gang设计事务所 / Studio Gang

当人们愈发意识到自然世界的不可替代性时，我们所能亲近的自然却日益减少，这是21世纪最大的讽刺之一，而这一现象在不断扩张的城市中尤甚。今天的城市居民必须跋山涉水才能感受到自然的魅力；与此同时，贪婪的扩张将城市栖息地原本多样化的特质毁之殆尽，威胁到许多人类所依赖的物种的生存，不仅令它们在城市中无处栖身，还阻断了其极为关键的迁移路径。

北岛公园项目旨在寻求改变这些如多米诺骨牌效应般的连环危机。该项目试图将芝加哥湖滨地带的一座人造半岛改造为面积近37hm²的生态系统——一座只有利用21世纪的知识技术才可建成的公园。项目设计充分体现了场地的人工性特质，并基于此进行地形改造和景观设计，来吸引野生动物来此栖息——以随着时间的推移，在更广泛的范围内创造一个拥有丰富生物多样性的生态系统，其中包含了各种各样的栖息地和特色建筑，使人们不必跋山涉水便可亲近自然。

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摘要

作为一项综合框架计划的组成部分之一，北岛公园项目将芝加哥湖畔的一处面积为37hm²的人造半岛改造为一个生机勃勃的生态公园。项目设计充分体现了场地的人工性特质，通过地形改造和景观设计，吸引野生动物来此栖息——以随着时间的推移，在更广泛的范围内创造一个拥有丰富生物多样性的生态系统。这里有着各种各样的栖息地和特色建筑，为人们提供了多种在城市中亲近自然的途径。

关键词

生物多样性；公共公园；生态系统；城市野生动物

ABSTRACT

Developed as part of a comprehensive framework plan, the Northerly Island project transforms a man-made peninsula on Chicago's lakefront into a 91-acre public park that functions as a living ecosystem. The design embraces the site's artificiality, constructing a topography and landscape that encourages wildlife to occupy it — over time, creating an amplified, bio-diverse ecosystem whose various habitats and architectural features offer people multiple ways to engage nature in the city.

KEY WORDS

Biodiversity; Public Park; Ecosystem; Urban Wildlife

整理、译 田乐

EDITED AND TRANSLATED BY Tina TIAN

项目地址：

美国伊利诺伊州芝加哥市

项目面积：

36.8hm²

项目委托：

芝加哥市政府

首席设计师：

Jeanne Gang、Mark Schendel

项目负责人：

Claire Cahan、William Emmick

设计团队：

建筑设计——Studio Gang设计事务所（Claire Halpin、Jay Hoffman、Thorsten Johann、Wei-Ju Lai、Jeana Ripple、Rodia Valladares Sanchez、Beth Zacherle）

景观设计/滨海工程——SmithGroupJJR集团

生态顾问——Applied生态设计咨询公司

财务顾问——Applied房地产分析公司

可持续工程顾问——dbHMS绿色建筑咨询公司

交通顾问——Fish交通集团

平面设计——Studio V Design设计工作室

设计时间：

2007~2010年

施工时间：

2012~2015年（一期工程）

所获奖项：

2015美国建筑师协会伊利诺伊州分会设计荣誉奖

2013环境设计研究协会最佳场所营造奖

LOCATION:

Chicago, Illinois, USA

AREA (SIZE):

91 acres

CLIENT:

City of Chicago

CHIEF DESIGNERS:

Jeanne Gang, Mark Schendel

PROJECT LEADERS:

Claire Cahan, William Emmick

PROJECT TEAM:

Architecture: Studio Gang (Claire Halpin, Jay Hoffman,

Thorsten Johann, Wei-Ju Lai, Jeana Ripple, Rodia

Valladares Sanchez, Beth Zacherle);

Landscape Architect / Coastal Engineer: SmithGroupJJR;

Ecologist: Applied Ecological Services, Inc.;

Financial Consultant: Applied Real Estate Analysis, Inc.;

Sustainability Engineer: dbHMS;

Transportation Consultant: Fish Transportation Group, Inc.;

Graphic Designer: Studio V Design

DESIGN PERIOD:

2007 ~ 2010

CONSTRUCTION PERIOD:

2012 ~ 2015 (Phase I)

AWARDS:

Honor Awards, American Institute of Architects (AIA)

Illinois, 2015

Great Places Award, The Environmental Design Research

Association, 2013

在丹尼尔·伯纳姆和爱德华·H·本尼特于1909年制定的“芝加哥计划”中，北岛是首个以保护城市海岸线并创建公共公园为目的而建造的岛屿链。北岛建于20世纪20年代，1930年，阿德勒天文馆在此建成，场地后于1933~1934年间被用作蜂鸟保护中心，并成为了芝加哥世博会场址。1938年，随着与内陆之间相连的堤道的建成，北岛成为了一个半岛。10年之后，梅格斯机场（单跑道私有机场）在北岛落成，就此北岛被作为私有空间使用。2003年，时任市长理查德·M·戴利将机场封闭，这一举动引来了不少争议。不久之后，这片土地在芝加哥公园管理局的推动下逐渐恢复了公众使用。

Studio Gang设计事务所于2010年完成了北岛公园的设计。该方案隶属于一项综合框架计划——该计划由公园管理局与景观设计和海岸工程设计公司SmithGroupJJR集团合作制定——旨在利用场地得天独厚的滨湖区位，加强公园与邻近天文馆园区的联系，以在城市中创造更多的学习、娱乐和享受自然的机会。

北岛的新地形由其自身回收而来的混凝土和抛石筑成，并在表层铺设了清洁土壤，

用以种植植被。为了将北岛打造为一个一年四季都可为市民服务的目的地，项目设计了一系列可供游人单独或多人享用的空间，人们可以在这里开展各类活动，并获得丰富的教育机会和自然体验。公园的设计和活动策划都基于场地现有条件设置，由北到南形成了从主动活动区域到被动活动区域的过渡：场地北部被设计为富有活力的娱乐活动区；南部为形式多样的栖息地区域，相对安静的环境为游人提供了更加私密化的空间体验。

该项目为游客提供了许多可以近距离探索这些环境的机会——包括一个新的步道系统、木栈道等设施，以及各类教育项目——人们可以尽情享受漫步、皮划艇、观鸟、露营、潜水等活动。在游人较为集中、靠近天文馆的北区，该设计计划修建一座与周边景观相融合的露天音乐剧场，以加强北岛的文化氛围。剧场的台地和走道都设有建筑尺度的天文仪器，为整座岛屿营造了富有特色的陆地与水上天际线。这座露天剧场在冬季也可被用作溜冰场——充分体现了如何通过设计使场地成为一个可以灵活地供全年使用的户外空间。

设计团队在场地南部设计了一处浮水植

LEGEND 图例

BUILDINGS 建筑

- 01 Adler Planetarium 阿德勒天文馆
- 02 Amphitheater 露天剧场
- 03 Education Center 教育中心
- 04 Event Pavilion 活动场馆
- 05 Harbor Walk with Leasable Retail
港口步道, 周边有可出租的零售商业
- 06 Outdoor Classroom 户外教室
- 07 Operations / Services Shed 运营/服务处
- 08 Bird Blind Pier 观鸟亭
- 09 McCormick Place Convention Center
McCormick会议中心

LANDSCAPE 景观

- 10 Woodland 林地
- 11 Savannah 草地
- 12 Prairie 草场
- 13 Wetland 湿地
- 14 Emergent Marsh 沼泽
- 15 Aquatic Emergent Environment 水生环境
- 16 Great Lawn 大草坪
- 17 12th Street Beach 12街海滩
- 18 Nature Beach 天然海滩

INFRASTRUCTURE 基础设施

- 19 Cable Ferry / Pontoon Bridge
渡轮/浮桥
- 20 Suspension Bridge 吊桥
- 21 Summer Floating Bridge 夏季浮桥
- 22 Island Touring Loop: Paved Beach Route
环岛游线: 有铺装的道路
- 23 Island Touring Loop: Compacted Gravel Route
环岛游线: 碎石填充的道路
- 24 Informal Paths 小路
- 25 Reef Walk 探礁处

- 26 Reef Point 缩帆点
- 27 Kayak Launch 皮艇下水点
- 28 Floating Platform 水上平台
- 29 Sunken Ship 沉船
- 30 Blow Holes 喷水洞
- 31 Demonstration Gardens 示范花园
- 32 Picnic Grove 野餐树林
- 33 Fire Pit 火山坑
- 34 Fishing Piers 渔港
- 35 Camping Bowl 露营地
- 36 Outdoor Exhibits 户外展示

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- 2. 直到2003年, 北岛一直被用作私人机场。
- 3. 总平面图

- 2. Northerly Island was a private airport until 2003.
- 3. Site plan

物湿地和草地, 以吸引候鸟来此栖息, 并在场地东侧的离岸区域设计了隔离岛链, 以保护北岛免受来自密歇根湖汹涌的波浪侵袭。人工礁石取代了岛屿原有的硬质基缘, 不仅塑造出一种柔性绿色边界, 还形成了一处平静的淡水泻湖。这处泻湖既为五大湖水生物种提供了理想的栖息环境, 也为水上娱乐项

目创造了绝佳条件——这些景色优美、富有教育功能的栖息地将成为芝加哥湖岸线上独一无二的景致。在陆地上, 采用“蜂巢”状的六边形几何构筑物来组织岛内的栖息地类型, 并使栖息地之间交界区的面积最大化, 从而创造出尽可能多的有利于生物多样性的环境条件。

2012年秋，北岛最南端面积为16hm²的栖息地展开修复工作。在美国环境保护局的“五大湖修复计划”和芝加哥公园管理局的资助下，修复项目作为北岛改造计划的一期工程开始实施。2015年9月，公园南区重新向公众开放，游客可以沿着环岛游道漫步、骑行，或体验其他户外活动。例如，公园管理局举办了一次青少年夏令营，通过提供在岛上露宿的机会，使游客可以在城市之内即可锻炼野外技能、感知自然的魅力。修复项目中还专门为濒危物种创建了水生栖息地，并为候鸟提供了必要的筑巢材料和食物来源。后续工程的筹款工作仍在进行当中。

该项目还设计了一套可持续系统，其能够辅助并扩大北岛自然系统所提供的天然基础设施功用，该系统将依照计划逐步修建。

例如，设计和工程团队设计了一个可对场地周边雨水进行收集的网络，收集来的雨水将用于补给湿地，同时也为地热交换循环和能量生成涡流创造了条件。

我们设计的公园会随着我们人类对于“自然”的观念的变化而改变，北岛公园项目恰恰体现了我们对于公共绿地所能发挥功能的认知的重大转变。通过将野生元素与人工构筑相结合，该项目反映出自然令人敬畏的一面，以及其作为基础设施服务提供者的重要意义。这个项目同时也揭示出我们对于城市本身的构想的转变：湖滨水岸已由服务于城市的工业生产转变为成为城市的生态基础设施，这预示着在未来的城市中，自然元素和城市肌理将更为融合，从而实现最大效益的双赢。**LAF**

4.

2012年秋，北岛最南端面积为16hm²的栖息地展开修复工作。2015年9月，公园南区重新向公众开放。后续工程的筹款工作仍在进行当中。
5.

场地活动项目规划图。为了将北岛打造为一个一年四季都可为市民服务的目的地，项目设计了一系列可供游人单独或多人享用的空间，人们可以在这里开展各类活动，并获得丰富的教育机会和自然体验。
6.

公园的设计和行程安排基于场地现有条件设置，由北到南形成了从主动活动区域到被动活动区域的过渡：场地北部被设计为富有活力的娱乐活动区；南部为形式多样的栖息地区域，相对安静的环境为游人提供了更加私密化的空间体验。
4.

Habitat restoration of Northerly Island's southernmost 40 acres began in the fall of 2012. The southern end of the island was opened to the public in September 2015. Fundraising for subsequent phases is ongoing.
5.

Site strategy plan diagram. To transform the island into a year-round destination, the park is designed to provide a range of activities, educational programs, and natural experiences that can be enjoyed individually or in groups.
6.

The design and program respond to the island's existing conditions, transitioning from a place of lively group recreation at the northern end, to the rich habitat toward the island's southern end that fosters quieter, more focused individual experiences.

© Tom Harris Photography
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It is one of the twenty-first century's great ironies that the more we come to understand the irreplaceable capabilities of the natural world, the less of it we have left. This is particularly salient in cities, where sprawling development continues to extend the urban footprint ever further. Today's city dwellers must overcome increasing distances to experience the wonders and benefits of nature. Simultaneously, sprawl's erasure of once-diverse habitat threatens the survival of many species upon whom humans depend, not only displacing them but also

obstructing crucial migratory pathways.

The Northerly Island project seeks to counteract these interconnected crises by transforming a man-made peninsula on Chicago's lakefront into a 91-acre living ecosystem: a public park that only twenty-first century knowledge could build. Its design embraces the island's artificiality and uses the occasion to construct a topography and landscape that encourage wildlife to occupy it — over time, creating an amplified, bio-diverse ecosystem whose various habitats and architectural features offer

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7. 项目设计的观鸟亭可供游人在2hm²的湿地中观察鸟类。
 8. 木栈道和水上平台为人们提供了亲水空间。
 9. 水下沉船为鱼类提供了栖息地，也成为了潜水爱好者的目的地。
 10. 在靠近天文馆的北区，该项目计划建造一座与周边景观相融合的露天剧场，以为北岛增添了新的文化氛围。在夏季，该露天剧场可以为现场音乐表演提供场地。剧场边缘的“漫步走道”上装有巨大的天文仪器，全年向游人开放。
 11. 露天剧场在冬季可被用作溜冰场。
7. The plan includes bird blinds that allow for birdwatching across a five-acre wetland.
 8. A proposed boardwalk and floating docks bring people close to the water.
 9. A sunken vessel can provide fish habitat and a destination for divers.
 10. At the north end of the island, near Chicago's Museum Campus, the design envisions an outdoor amphitheater that is integrated with the landscape, potentially one of many new cultural offerings. The amphitheater is designed to accommodate live music in summer. The "walk-about" at its perimeter is populated with giant astronomy installations that engage visitors year-round.
 11. The outdoor amphitheater is designed to become a skating rink in winter.

people multiple ways to engage directly with nature without ever leaving the city.

Daniel Burnham and Edward H.

Bennett's 1909 *Plan of Chicago* identified Northerly Island as the first of a chain of islands that would be built to protect the city shoreline and provide public parkland. Constructed in the 1920s, Northerly later became the site for the Adler Planetarium in 1930 and a humming center of activity from 1933 to 1934, when it hosted the Century of Progress Exposition. In 1938 it was connected to land via causeway and became a peninsula. Ten years later, a single-strip private airport, Meigs Field, opened on Northerly, ending its use as a public space. Mayor Richard M. Daley controversially ripped out the runway in 2003. Soon afterward the land was restored to public use under the care of the Chicago Park District.

Studio Gang completed Northerly Island's design in 2010 as part of a comprehensive framework plan created in collaboration with the Park District and SmithGroupJJR. The plan builds on the site's unique location on the lake and strengthens the park's relationship to the adjacent Museum Campus to expand opportunities for learning, recreation, and enjoyment of nature in the city.

The island's new topography is shaped from its own recycled concrete and rip-rap and supplemented with clean soil to support new plantings. To transform the island into a year-round destination, the park is designed to provide a range of activities, educational opportunities, and natural experiences that can be enjoyed individually or in groups. The design and program respond to the island's existing conditions, transitioning from a place of lively group recreation at the northern end, to the rich habitat towards the island's southern end that fosters quieter, more focused individual experiences.

The design creates many

© Studio Gang

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opportunities for visitors to explore these environments up-close and in detail — including a new trail system, waterfront boardwalk, and other amenities, coupled with educational programming — that allow them to enjoy activities from strolling and kayaking to birdwatching, camping, and scuba diving. At the northern, the busier end of the island, near the Museum Campus, the design proposes an outdoor music amphitheater, integrated into the landscape, that expands Northerly's cultural offerings. The amphitheater's terraces and walkways are populated with architectural-scale astronomical instruments that complement the island's terrestrial and aquatic features. The amphitheater is also designed to become a skating rink in winter, one example of how

the site is designed to flexibly provide year-round opportunities to enjoy the outdoors.

At the remote southern half of the island, the design calls for an emergent wetland and savannah that attract migratory birds. Off the eastern coast, it proposes a chain of barrier islands that protect the island from Lake Michigan's powerful waves. This artificial reef would allow a soft, green edge to replace the island's existing armored perimeter. It would also create a calm, freshwater lagoon that is the ideal environment for native Great Lakes species and for aquatic recreation — fostering a scenic and educational habitat that would be unique along the entire Chicago coastline. On land, a "honeycomb" hexagonal geometry was employed to organize the island's habitat types and maximize the

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edge between habitats, where their mixing creates rich environmental conditions that best support biodiversity.

Habitat restoration of Northerly Island's southernmost forty acres began in the fall of 2012. Funded by the United States Environment Protection Agency's Great Lakes Restoration Initiative and the Chicago Park District, this restoration project is the first phase of the island's

transformation. Following the reopening of the park's southern end to the public in September 2015, visitors can now walk and bike along a looping path and enjoy other outdoor activities. For example, the Park District introduced a youth summer camp and expanded opportunities for overnight camping on the island to give visitors the chance to gain skills and respect for nature without leaving the city. The restoration

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12. 地形设计图及剖面图。北岛的新地形由其自身回收而来的混凝土和抛石筑成，并在表层铺设了清洁土壤，以种植植被。为了实现五大湖地区鱼类保育和栖息地修复的宏大愿景，公园塑造了适宜水生植物生长的地形，以提升场地的生物多样性。
 13. 采用“蜂巢”状的六边形几何构筑物来组织岛内的栖息地类型，并使栖息地之间交界区的面积最大化，从而创造出尽可能多的有利于生物多样性的环境条件。
 14. 场地南部的湿地和草地将逐渐形成成熟的植物群落，部分鸟类、鱼类及其他物种已经来此栖息。
12. Topographic plan and section. The island's new topography is shaped from its own recycled concrete and rip-rap and supplemented with clean soil to support new plantings. Envisioned as contributing to a larger effort to restore native fish population and habitat in the Great Lakes region, its aquatic topography is designed to support a diverse variety of species.
 13. A "honeycomb" hexagonal geometry was employed to organize habitat types and maximize the edge between habitats, where the most biodiversity is found.
 14. The wetland and savanna on the southern end of the island will continue to mature and are already attracting birds and fish as well as other native species.

© Steve Hall / Hedrich Blessing

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work also introduced aquatic habitat for threatened species and crucial nesting and feeding sources for migratory birds. Fundraising for subsequent phases is ongoing.

The design also includes sustainable systems that aid and expand upon the free infrastructural work performed by the island's natural systems. These systems can be implemented as the plan's successive

phases are realized. For example, the design and engineering team identified a nearby rainwater collection network that could be diverted to recharge the wetland, as well as opportunities for geothermal exchange loops and energy generative wave turbines.

As our parks evolve along with our changing human ideas of "nature," Northerly Island signals a major shift in what we believe our public green spaces can be. By

unapologetically mixing the wild with the constructed, the project's design highlights nature as an awesome spectacle and a provider of infrastructural services. It also reveals a change in our conception of the city itself — demonstrating that our lakefront can transition from a link in an industrial system to a link in an ecological one, forecasting an urban future where nature and city blur for mutual and maximum benefit. **LAF**