

Article

Application of the Sustainable Sites Initiative Rating System in Urban Green Space Construction in China—The Case of Xuhui Runway Park

Guangsi Lin ^{1,2,*}, Xin Zhu ¹ and Xiaoqi He ¹

¹ Department of Landscape Architecture, School of Architecture, State Key Laboratory of Subtropical Building and Urban Science, South China University of Technology, Guangzhou 510641, China; zx_peris@163.com (X.Z.); h_oran@163.com (X.H.)

² Guangzhou Municipal Key Laboratory of Landscape Architecture, South China University of Technology, Guangzhou 510641, China

* Correspondence: arlgs@scut.edu.cn; Tel.: +86-20-87113624

Abstract: The Sustainable Sites Initiative (SITES) is a comprehensive evaluation system for sustainable landscape, which has been promoted successfully and widely recognized in the landscape architecture industry. However, the existing research lacks attention to the applicability of SITES to urban green space construction projects in China. Therefore, exploring the application of the SITES evaluation system in the context of Chinese urban green space development is of great importance. Building upon theoretical research on sustainable landscapes, this study focuses on urban green space projects as the research carrier, with SITES as the subject of investigation. Utilizing the case study method, a thorough description and analysis of Xuhui Runway Park, a representative case officially certified by SITES in China, is provided. Across four stages—project initiation and planning, scheme design, construction, and operation—this study discusses the approaches employed in Chinese urban green space projects to meet the requirements of the SITES evaluation system. By evaluating the applicability of SITES to Chinese urban green space projects, identifying limitations in system promotion, and offering references for sustainable design practices, this study advances the application and promotion of SITES in China and contributes to the sustainable development of the landscape architecture industry.

Keywords: urban green space; Sustainable Sites Initiative (SITES); sustainable landscape; landscape performance



Citation: Lin, G.; Zhu, X.; He, X. Application of the Sustainable Sites Initiative Rating System in Urban Green Space Construction in China—The Case of Xuhui Runway Park. *Land* **2024**, *13*, 309. <https://doi.org/10.3390/land13030309>

Academic Editor: Marco Marchetti

Received: 19 December 2023

Revised: 2 February 2024

Accepted: 6 February 2024

Published: 29 February 2024



Copyright: © 2024 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The ecological and environmental crisis triggered by rapid urbanization has raised global concerns. In 1987, the World Commission on Environment and Development (WCED) first defined “Sustainable Development” in its report “Our Common Future”: *Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs* [1]. The global sustainable development strategy established by the United Nations in 2015 further clarified the meaning and scope of sustainable development [2,3]. After years of significant attention paid to sustainable development by the United Nations and governments worldwide, it has evolved into a universally acknowledged guiding principle aiming at safeguard the Earth’s life-support systems and enhance human well-being [4]. As a result, sustainable development has gained consensus among industries as the model for future development [5,6]. Consequently, the establishment of a comprehensive and directive sustainable evaluation system has emerged as a key research area for experts and scholars across different nations [7].

The sustainability assessment system began early in the field of construction industry, with the development of numerous pilot projects, supporting tools, and sustainable assessment systems such as LEED, BREEAM SBTool, or CASBEE [8,9]. These systems aimed

to assist decision-makers in improving the environmental performance of buildings [10]. As efforts to expand sustainability assessment intensified, rating systems like ‘Leadership in Energy and Environmental Design for Neighborhood Development’ (LEED-ND) were developed and implemented, both at the neighborhood scale [11] and the city scale [12,13]. Furthermore, with the promotion of the concept of sustainable development, landscape sustainability is also attracting attention. Sustainable landscapes are responsive to the environment, re-generative, and can actively contribute to the development of healthy communities. Sustainable landscapes sequester carbon, clean the air and water, increase energy efficiency, restore habitats, and create value through significant economic, social, and environmental benefits [14]. With the growing ease and frequency of international academic exchanges, comprehensive sustainable landscape evaluation systems, including LEED-ND, Sustainable Sites Initiative (SITES), and the Landscape Performance Series (LPS) research program, have been established and adopted in several countries [15]. These evaluation indicators and criteria have gained widespread acceptance and recognition in practical application. Among these sustainable landscape evaluation systems, SITES is the earliest and relatively most mature landscape sustainability evaluation system. It is dedicated to applying sustainable development principles to any type of site, focusing on the landscape attributes and the integration of buildings and landscape. Therefore, it is applicable not only to city parks [16], zoos [17], and gardens [18], but also to other areas not covered by the LEED rating system.

However, China currently lacks a standardized system to guide sustainable landscape construction. The introduction of the SITES system provides a new foundation for relevant research in the country. Existing studies often overlook the applicability of the SITES system in the context of urban green space construction in China. The direct adoption of the SITES system as a basis for design research can face reasonable questioning about its validity. Therefore, this study focuses on the SITES evaluation system itself. Utilizing a case study approach, it interprets representative SITES-certified projects in China, aiming to summarize sustainable design strategies for urban green space projects in the country. The exploration of their practical application in the context of urban green space construction in China is crucial. Investigating the implementation of the SITES evaluation system in Chinese urban green space projects holds great significance for research in this field.

1.1. SITES Rating System

The Sustainable Sites Initiative (SITES) is a research project initiated in 2006 through a collaboration between the American Society of Landscape Architects (ASLA), the Lady Bird Johnson Wildflower Center (LBJWC), and the United States Botanic Garden (USBG). Its objective is to provide guidance and performance standards for the planning, design, construction, and operational maintenance practices of landscape architecture projects [19], systematically evaluating sustainability throughout the entire lifecycle of landscape architecture projects [20]. In 2009, SITES released the first edition of its evaluation system, known as the “The Sustainable Site Initiative™ Guidelines and Performance Benchmarks (SITESv1)”. It was the earliest globally recognized and relatively mature and comprehensive evaluation system for sustainable landscape sites. After two years of pilot project testing, the guidelines, indicators, and weighting system of the evaluation system were further refined. In June 2014, the “SITES v2 Rating System” and the “SITES v2 Reference Guide” [21] were officially published, providing guidance, standards, and assessment methods for sustainable site design. SITES v2 is the first rating system open to the public and serves as the foundation for obtaining landscape design certification.

The SITES v2 Rating System comprises ten major sections, including 18 prerequisites, 48 credits, and 1 bonus point, totaling 209 points. It quantitatively evaluates and certifies participating projects. The certification levels include Certified (70–84 points), Silver (85–99 points), Gold (100–134 points), and Platinum (135+ points). Currently, SITES has gained widespread application globally. As of fall 2023, nearly a hundred projects have received official certification. These projects are distributed across 22 countries [22]. The

majority of these certified projects are from the United States, while the number of officially certified projects in China is relatively limited. However, the increasing count of pre-certified projects in recent years indicates China's accelerating acceptance and utilization of SITES.

1.2. Research Overview

China has consistently placed a high emphasis on sustainable development. In May 1994, the publication of "China's Agenda 21" marked the first articulation of the country's overall development strategy for sustainable development [23]. In recent years, China has introduced various standards and norms aimed at guiding sustainable practices across different domains. Within these standards and norms, attempts have been made to assess sustainable landscape design at the "site" scale. The indicators set forth in the "National Garden City Series Standards" reflect the urban construction sector's attention to the principles of sustainable development [24]. However, the specific evaluation lacks consideration for the entire lifecycle process of landscape construction. The "Sponge City Construction Evaluation Standards" (GB/T 51345-2018) focus on evaluating urban areas, with minimal coverage of other aspects of landscape construction [25]. In the field of architecture, the 2019 revision of the "Green Building Evaluation Standard" (GB/T 50378-2019) represents a relatively comprehensive assessment system [26]. Its role and significance in China's construction industry are comparable to the influence of LEED in the United States for green buildings. While it addresses evaluation indicators at the "site" scale, these are integrated within the broader framework of building design, without considering the "site" as a primary focus.

China lacks quantitative research on landscape sustainability, particularly in understanding the concept of "site". Therefore, after the release of the SITES evaluation system, many scholars have conducted studies on its application and comparisons with other Chinese evaluation systems. Studies like [27,28] emphasize the significant guidance role of the SITES system in the current context of land development and construction in China. Ye and Dong [29] elucidate the feasibility of the SITES evaluation system at various stages from design to construction, emphasizing the necessity of promoting the SITES evaluation system domestically. Jia and Guo [20] conduct a detailed comparative study of the SITES evaluation system, summarizing the modifications and changes in two versions. Additionally, Yang and Lin [15] propose that the assessment standards and requirements of SITES will be continuously optimized with accumulated practical experience.

The SITES evaluation system is gradually becoming an acknowledged standard for sustainable landscape assessment in China, leading to various applied research efforts [16,30,31]. While these studies contribute to enriching the theoretical landscape of sustainable practices in China, a notable gap exists as most research lacks a thorough discussion on the applicability of the SITES system to Chinese landscape projects. Only a few scholars have highlighted the importance of considering the differences in the landscape construction environments between China and the United States [32]. With the continuous promotion and prevalence of SITES, there are currently three officially certified projects in China. Therefore, employing the case study method to further investigate the application of the SITES evaluation system becomes relevant. The focus should be on understanding how the SITES evaluation system guides design practices, identifying potential challenges during this guidance process, and advancing the promotion and localization of the SITES system.

2. Materials and Methods

2.1. Research Methodology

This study mainly adopted the case study method to collect and describe the case study data through multiple sources and draw conclusions through cross-tabulation analysis. We selected Xuhui Runway Park in Shanghai, a public project in China officially certified by SITES, as a representative case [33]. Through the field research of the selected case project, the ten framework elements of SITES were used as the basis for non-participatory and

structured observation of the landscape design and human behavior activities on the site. We took photos of the project using drones and camera photography, to obtain an objective and comprehensive understanding of the environmental, economic, and social value of the project after its completion.

2.2. Case Selection

According to the SITES official website, as of fall 2023, there are 3 officially certified projects in China: Bai'etan Exhibition Center in Guangzhou, Avenue of Stars in Hong Kong, and Xuhui Runway Park in Shanghai. Additionally, there are 8 projects that have received pre-certification [34]. We selected research cases based on the following three criteria:

- (1) Selecting representative Chinese SITES-certified projects. In a single-case study, it is essential to investigate cases with typical significance to gain a comprehensive understanding of a specific commonality or phenomenon [33,35]. Therefore, the selection of representative Chinese SITES-certified projects for research is necessary.
- (2) Selecting certified projects rather than pre-certified ones. USGBC has established the fundamental principle that “pre-certification does not equal formal certification” for LEED, and this principle equally applies to SITES. In reality, some projects that receive pre-certification may not meet the requirements for formal certification after completion. Therefore, to better guide sustainable landscape design practices through case studies, this article opts for projects formally certified by SITES instead of pre-certified ones.
- (3) Selecting project that are feasible for on-site research and publicly accessible. Considering objective factors such as the project's openness and permission for public disclosure, we systematically screened three formally certified projects in China. During the data collection phase, Hong Kong Avenue of Stars is not viable for on-site research due to mainland China's COVID-19 prevention policies regarding Hong Kong. The Bai'etan Exhibition Center in Guangzhou has not yet obtained regional government approval and is currently under closed management. Although researchers can conduct on-site research, documenting the completed site effects through photography is not feasible. Additionally, the project owner, Pearl River Development Investment Co., Ltd. (Zhujiang, China), has not approved public disclosure.

Based on the aforementioned criteria, the Shanghai Xuhui Runway Park, as the first publicly accessible project in China to receive formal SITES certification, was ultimately selected as a representative case for in-depth on-site and design research.

2.3. Data Sources

Yin, R. K. [35] outlined six common sources of evidence in case studies in “Case Study Research: Design and Methods,” which include documents, archival records, interviews, direct observations, participatory observations, and physical evidence. This study primarily relied on three types of evidence: documents, direct observations, and interviews.

- (1) Documentary evidence includes SITES official certification reports [36], publicly available project information from design teams [37], case-related research papers [20,21], government planning documents [24,25], online media reports [38], and other secondary information.
- (2) Direct observation evidence is non-participatory observation through the researchers' field research. It mainly includes the overall layout of the site, surrounding environment, spatial division, planting, landscape nodes and other design elements and behavioral activities of site users and maintenance managers. The information is recorded using drone photography, camera photography, pen and paper, etc.
- (3) The interview evidence is mainly textual information compiled through semi-structured interviews. We conducted interviews with people involved in the project construction process or SITES certification, such as Mr. Yu Zhu, project manager of Xuhui Runway Park, Ms. Zihan Zhou, from the Market Development and Transformation Depart-

ment of USGBC North Asia Regional Office, and Mr. Li, security officer of Xuhui Runway Park.

Collecting relevant information and data from various channels enables a comprehensive understanding of the project. We compiled this information, paying attention to the mutual confirmation between data from different sources, forming a triangulation of evidence. This approach enhances the construct validity of the research [35].

2.4. Research Framework

2.4.1. Unit of Analysis

The unit of analysis refers to the specific case selected for the study. In this study, the chosen case is the Xuhui Runway Park in Shanghai. Xuhui Runway Park is the first project in mainland China to achieve SITES Gold-level certification, emphasizing sustainability in its landscape functionality from design to completion.

2.4.2. Embedded Unit of Analysis

A case study may involve analysis units beyond the primary level, which are embedded within the main analysis unit. These embedded units of analysis aid researchers in clarifying the study’s content and conducting more in-depth analyses of the case. They also serve as sources to guide data collection in case studies [35].

The planning, design, and construction process of landscape architecture projects can be divided into two major stages based on scale hierarchy: urban scale and site scale. In this context, site-scale landscape architecture projects necessitate an expansion based on higher-level plans proposed at the urban scale. These plans include urban master plan, zoning plan, regulatory detailed plan, and construction detailed plan. Simultaneously, site-scale landscape architecture projects can be categorized according to the entire lifecycle process into four stages, namely, Project Initiation and Planning, Conceptual Design, Construction and Implementation, and Operation and Utilization, thus forming the entire lifecycle process of landscape architecture projects (Figure 1).

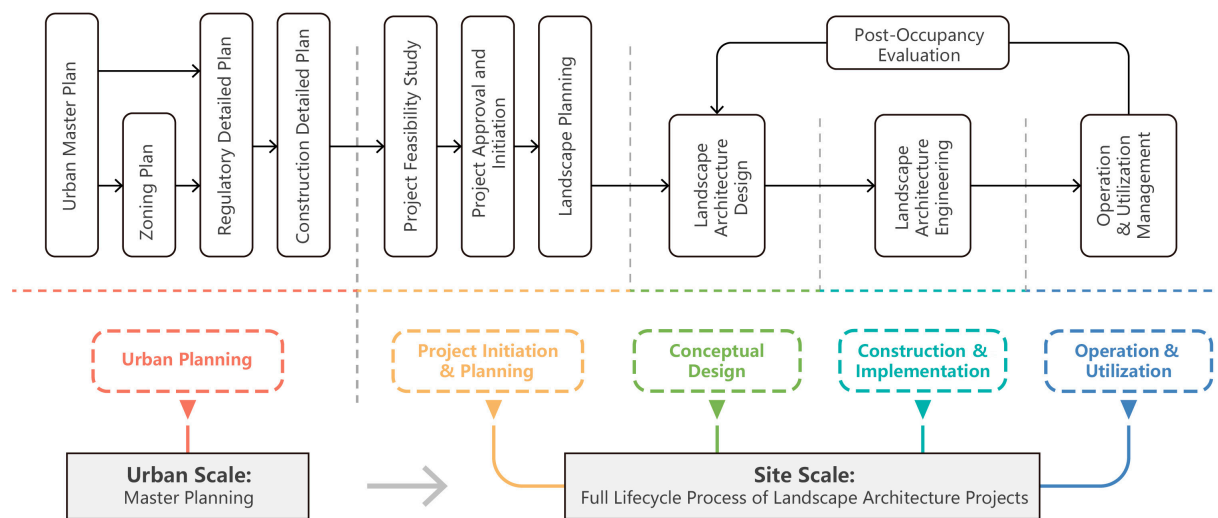


Figure 1. Landscape architecture project process diagram.

This study focuses on the specific performance and existing issues of Chinese SITES-certified projects throughout the entire process, from Project Initiation and Planning to Conceptual Design, Construction and Implementation, and Operation and Utilization. Therefore, these four stages of the landscape architecture project’s lifecycle are considered as embedded units of analysis. Each of these four embedded units of analysis is thoroughly described, followed by cross-analysis for validation. Ultimately, the study aims to analyze and summarize the findings to draw research conclusions.

3. Results

Xuhui Runway Park is an urban revitalization project developed and invested by Shanghai Xuhui Binjiang Development and Investment Construction Co., Ltd. (Shanghai, China). It was designed by the landscape design company Sasaki. The construction of Xuhui Runway Park began in March 2016, with different sections being constructed and opened to the public in stages. By 2020, all sections had been completed and were freely accessible to the public (Figure 2).

Xuhui Runway Park is located in Xuhui District, Shanghai. It is an urban open space composed of Yunjin Road and a narrow-shaped park on its west side. The project covers an area of 14.63 hectares, with a green area of 8.24 hectares, stretching north to south for 1830 m. Additionally, Xuhui Runway Park serves as an overlying green space for Line 11 of the Shanghai Metro, with Yunjin Road and Longyao Road stations located within the park.

The park was originally an abandoned north–south concrete runway of the former Longhua Airport. The Sasaki design team participated in the project and proposed to transform the original runway into a linear park that preserves the aviation historical and cultural imprint. The Longhua Airport runway has reemerged into people’s sight, evoking memories of the old runway among the surrounding residents (Figure 3). Through a series of innovative and restorative measures, the project has strived to implement sustainable development principles in terms of ecology, society, and economy, leading the way to a new urban lifestyle.

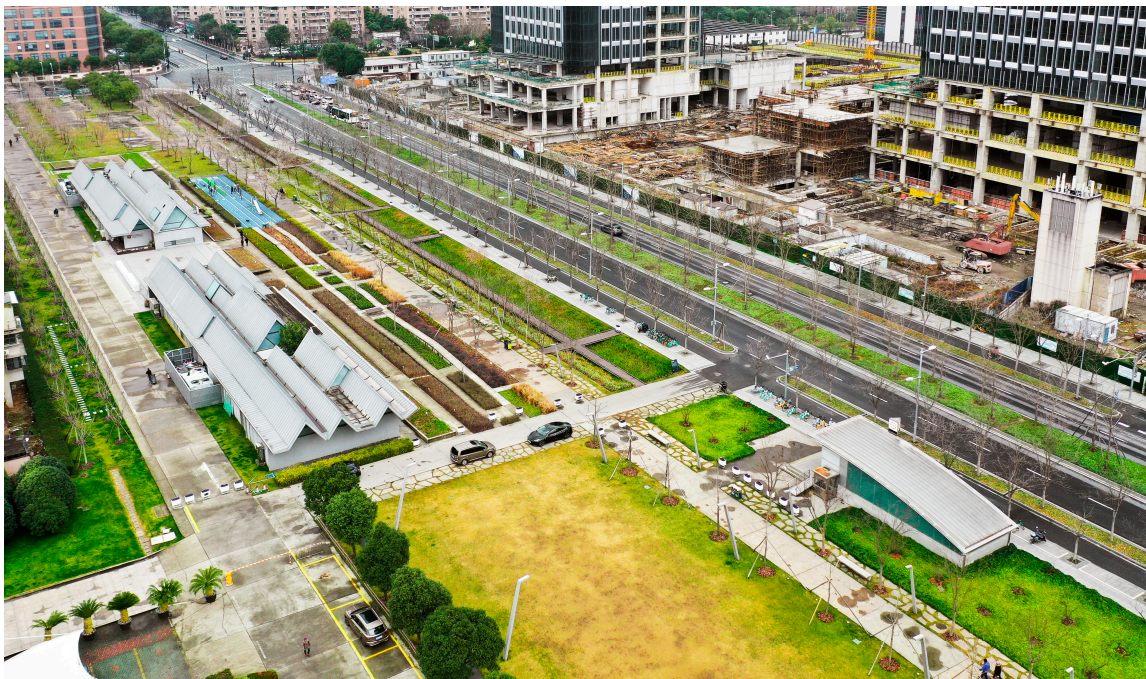


Figure 2. A bird’s-eye view of Xuhui Runway Park.

Xuhui Runway Park received a total score of 112 points in the SITES certification, earning it a Gold-level certification. It received full scores in “Pre-design Assessment + Planning” and “Innovation Or Exemplary Performance”. The park performed well in the “Site Context”, “Site Design—Water”, “Site Design—Human Health + Well-Being”, and “Education + Performance Monitoring” sections, with scores above 50%. However, it scored relatively lower in the “Site Design—Materials Selection” and “Construction” sections (Table 1, Figure 4) [36].

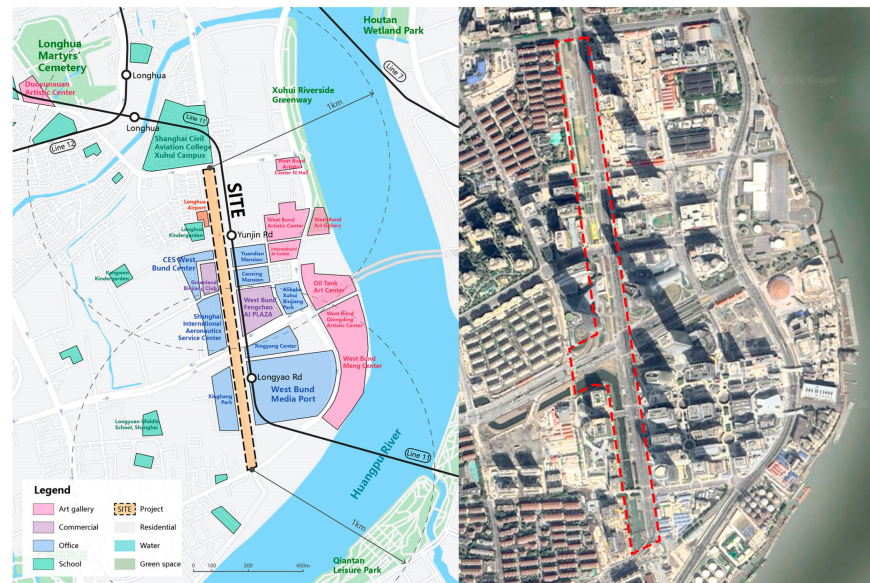


Figure 3. The site plan of Xuhui Runway Park. (The base map is sourced from Google Maps).

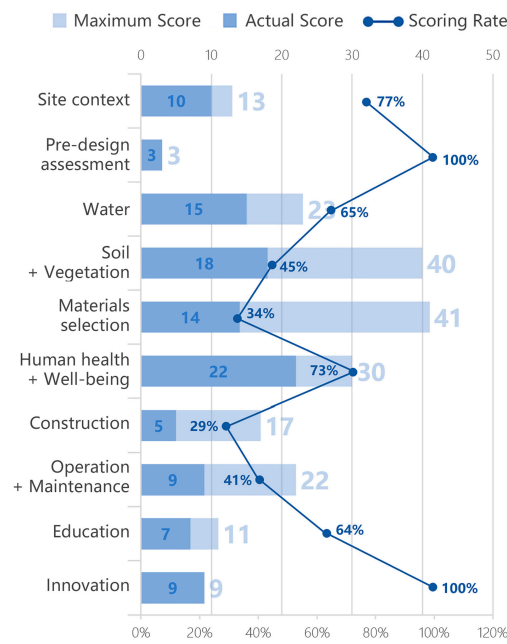


Figure 4. Analysis of SITES scores for Xuhui Runway Park.

Table 1. SITES scores for Xuhui Runway Park.

Sections	Scores
Total Score	112
Site Context	10/13
Pre-design Assessment + Planning	3/3
Site Design—Water	15/23
Site Design—Soil + Vegetation	18/40

Table 1. Cont.

Sections	Scores
Site Design—Materials Selection	14/41
Site Design—Human Health + Well-Being	22/30
Construction	5/17
Operations + Maintenance	9/22
Education + Performance Monitoring	7/11
Innovation Or Exemplary Performance	9/9

3.1. Project Planning and Programming Stage

3.1.1. Site Context

In the “Site Context” section, SITES requires projects to pay attention to their location and the surrounding development environment when siting developments, carefully plan and protect the site’s original functional natural features, and support developments on developed or degraded sites.

The site of Xuhui Runway Park was formerly a concrete airport runway without any natural functional features. The project period (2011–2012) coincided with the implementation of the 12th Five-Year Plan of Xuhui Riverfront District. The construction of transportation and living infrastructure around the site was becoming more and more complete. In the compact core business district, there was a lack of urban green space to provide ecosystem services. Therefore, the project of Xuhui Runway Park was not only a necessary part of the development and construction of the area but also an effective measure to promote the economic development of the surrounding area and improve human health and welfare.

3.1.2. Pre-Design Assessment and Planning

In the “Pre-design Assessment and Planning” section, SITES requires projects to use an integrated design process, to assemble an integrated design team, and to conduct a pre-design assessment or site study before beginning site design. In addition, site users and stakeholders are encouraged to participate in the design process by developing site planning and feasibility options to improve site ecosystem services.

(1) Form an owner-led integrated design team

The Xuhui Runway Park project is a typical “top-down” development and construction project. The relevant government departments issued regional development policies and established a government-level developer as the project owner, and the government developer formed a comprehensive design team. Sasaki, the project’s landscape design firm, also set up a special project team responsible for the preliminary research and evaluation of the site and the design work. The project team members mainly included company directors, lead designers, project managers, colleagues from other fields, etc. (Figure 5).

(2) Research and evaluation based on site characteristics and user needs

The policy supports from the government and developers, a professional and integrated design team, and consistent principles of sustainable goals were the prerequisites for Xuhui Runway Park to become a model of sustainable site design. Sasaki’s project team conducted an accurate and detailed assessment of the site’s current conditions, including site history, regional climate conditions, surrounding development environment, and user needs, to provide a vital basis for the subsequent design.

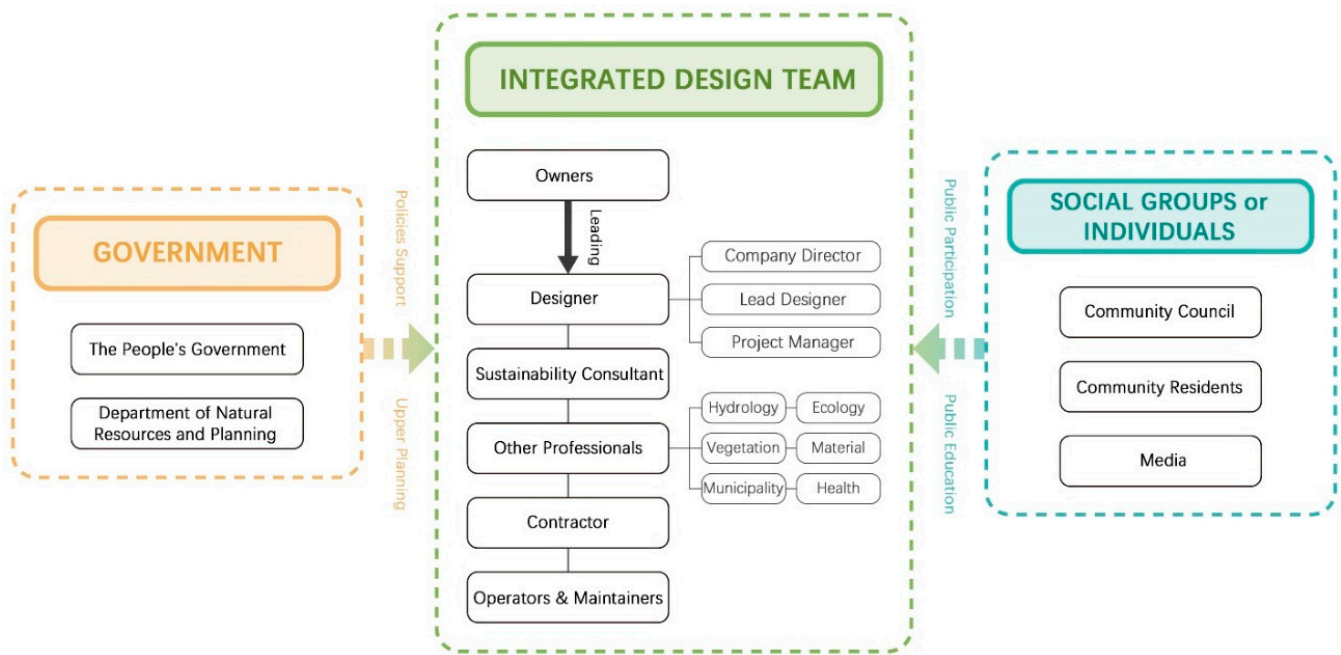


Figure 5. Integrated design team composition model.

(3) Encourage public participation

During the construction, the owner and the design team consciously incorporated public participation into the project construction planning and design process for the Xuhui Runway Park. However, from the results, it can be seen that the level and efficiency of public participation were not high, falling under "informative participation." This means that the design schemes for the site were publicized through media, government websites, etc. The degree of public participation was relatively low in the pre-design stage. At the same time, the main participants were mainly the community residents around the site, and the participation of non-profit organizations, enterprises, and other NGOs was limited.

3.2. Schematic Design Stage

3.2.1. Site Design—Water

In the "Site Design—Water" section, SITES requires projects to retain and treat natural precipitation on the site and reduce water consumption for landscape irrigation and water features to reduce the consumption of tap water resources. It was also required to improve precipitation utilization and protect water quality by designing functional and aesthetic stormwater management facilities.

During the design stage, Sasaki's design team systematically planned the whole process of collecting, purifying, storing, discharging, and utilizing rainwater in Xuhui Runway Park (Figure 6). The rainwater treatment process can be divided into two stages: the first stage is collecting and treating rainwater; the second stage is storing and utilizing rainwater. The precipitation within the site is collected in the rainwater collection and treatment stage. Water quality is purified through various forms of aesthetic rainwater management facilities, such as rain gardens, artificial wetlands, and linear drainage facilities. In this stage, the cistern at the bottom of the rain garden provides storage space for the purified rainwater. The collected rainwater can meet the irrigation needs of all vegetation and water supply for the water features in the park. Therefore, the park no longer needs additional water resources.

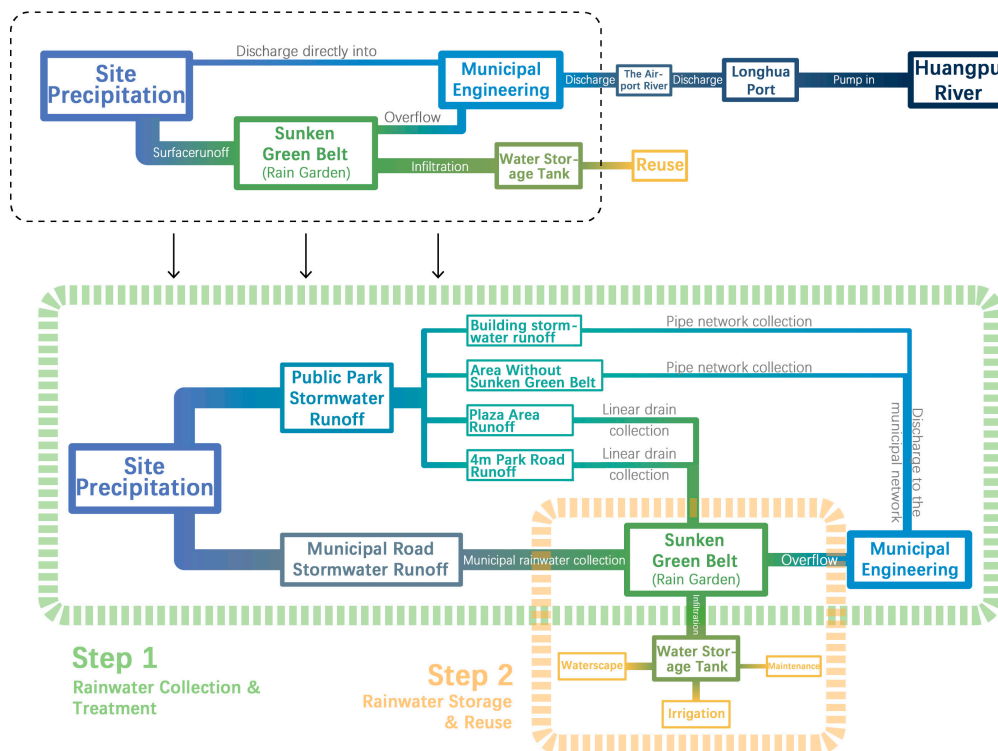


Figure 6. Xuhui Runway Park rainwater management system process.

3.2.2. Site Design—Soil and Vegetation

In the “Site design—Soil and vegetation” section, SITES requires projects to develop soil management plans during the design phase to preserve the original vegetation of the site to minimize damage to the ecosystem. The subsequent selection uses native plants to restore the native plant communities as much as possible to improve environmental, economic, and social benefits.

The Xuhui Runway Park site was formerly a concrete airport runway without any original soil or vegetation. The planting design in the scheme design phase follows the principles of land and tree suitability and biodiversity. They used native plants from the Yangtze River Delta region to form various terrestrial, aquatic, and street plant landscape types.

3.2.3. Site Design—Materials Selection

In the “Site design—Materials selection” section, SITE requires projects to recycle waste materials as much as possible when dismantling, selecting, procuring, and using materials in schematic design and subsequent construction. In order to reduce landfill volumes, projects must conserve natural resources and reduce greenhouse gas emissions.

Xuhui Runway Park achieves the requirements of SITES mainly by retaining, reconstructing, and recycling waste materials from the site and selecting economical and environmentally friendly construction materials.

(1) Retain, reconstruct, and recycle site wasted materials.

The use of the original concrete runway in Xuhui Runway Park can be summarized in three forms: retention, reconstruction, and recycling, which respectively create the main park road, embedded grass and crushed mosaic trails, and the base material of newly constructed road gravel (Figure 7). The project could dissipate nearly 70% of the concrete paving material on the site, which saved a significant amount of construction costs for the project and contributed to controlling carbon emissions. The remaining 30% of the material was recycled as road base material for other areas in Shanghai. Project manager Zhu Yu said, *Replacing the road surface material means the need to produce a large amount of permeable concrete, which generates new greenhouse gases. Additionally, the original road surface that is*

dismantled becomes construction waste that needs to be handled. Therefore, even though the site's surface may experience some degree of water accumulation due to poor permeability, retaining it directly is actually a more sustainable approach compared to the demolition and replacement of ground pavement.

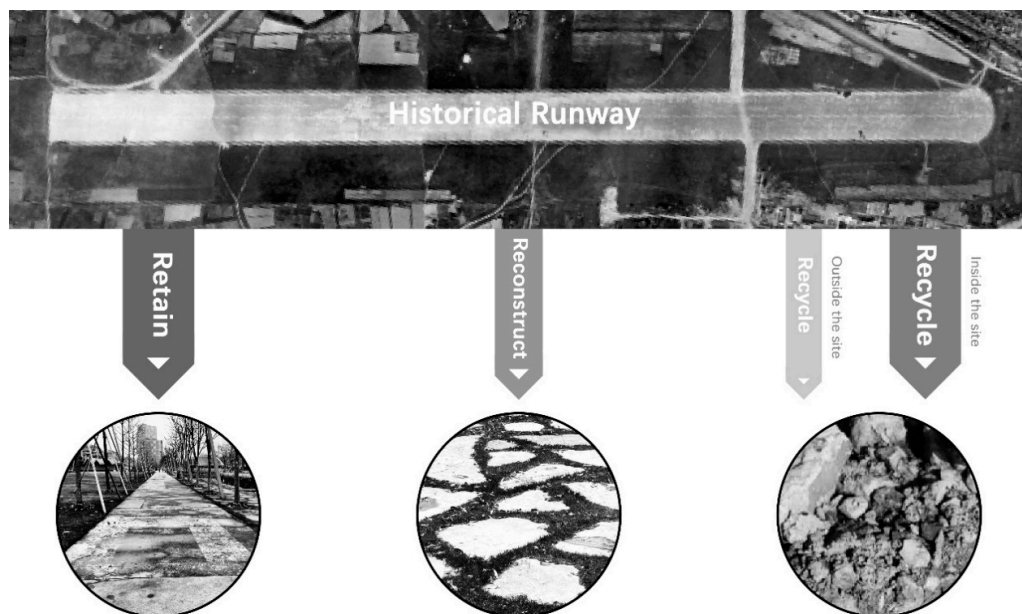


Figure 7. Three forms of utilization of former airport runway concrete.

(2) Use regional, economic, and environmentally friendly construction materials.

The construction materials of the landscape nodes in Xuhui Runway Park were all environmentally friendly materials procured by local or neighboring enterprises, such as the bamboo widely used in the park. Bamboo is a common plant featured in the southern region, with low cost, high wood strength, diverse processing products, flexible design, and high durability. It is an ideal sustainable material. The utilization of the original and regional materials of the site in Xuhui Runway Park is one of the highlights of the program design. The artistic landscape design concretely presents the public with historical memory and cultural connotation.

3.2.4. Site design—Human Health and Well-Being

In the “Site design—Human Health and Well-Being” section, SITES requires projects to preserve important historical and cultural landscapes. Projects are also expected to create spaces and opportunities for outdoor physical activity, psychological rehabilitation activities, and user social interaction. Meanwhile, projects should pay attention to social equity issues and build a more vibrant community.

Xuhui Runway Park achieved the requirements of SITES in this section by continuing the historical heritage of the site, creating landscape spaces that support different activities and rationalizing landscape facilities.

(1) Protect and maintain the site's historical lineage

The “*ecological recreational green space and public open space change model*”, which focuses on developing a high-quality modern service industry, is a crucial way to renew the industrial heritage along Shanghai's Huangpu River [39]. Xuhui Runway Park reflects the historical heritage of the site in the following aspects: the expression of the concept, the use of materials, the continuation of scale, the borrowing of shape, the imitation of terrain, and other design details. The image and significance of the site as the only aviation industrial heritage are reinforced. These design techniques rejuvenated this industrial

heritage site that had lost its vitality. The sustainable development of the site also serves as a continuation of the city’s historical heritage [40].

(2) Create landscape spaces that support different activities

To meet the users’ needs for gathering, recreation, conversation, meditation, and other activities, and to provide the opportunity to choose the space and place for activities freely, Xuhui Runway Park is equipped with various spaces of different scales and types, such as a comprehensive “runway”, a wetland observation deck, a sunken garden, an activity lawn, a children’s play area, and a shaded recreation area. These spaces vary in scale, plant design, and facility arrangement. Although the spatial characteristics can lead to space being more suitable for a specific type of activity (Table 2), project manager Zhu Yu said: *Xuhui Runway Park is a 24 h open urban public space for people of all ages and orientations. We do not make fixed scenes, stipulating that only certain activities can be carried out in space. Instead, we create scenes of different scales and feelings, so users can freely choose the location of their activities according to their preferences.*

Table 2. Typical space–activity relationships of Xuhui Runway Park.

	“Runway”	Wetland Platform	Sunken Garden	Activity Lawn	Children’s Playground	Wooded Leisure Area
Psychological rehabilitation activities	✘	●	●	✘	□	●
Outdoor sports activities	●	□	✘	●	●	●
Social communication activities	✘	□	●	●	●	□

● The space is more supportive of the activities. □ The space can perform the activities but it is not typical. ✘ The space is not suitable for the activities. The “Runway” refers to the integrated linear space consisting of bicycle paths, pedestrian paths, and main garden paths.

(3) Reasonable arrangement of landscape facilities

Although landscape facilities are a microscopic element in urban green space, they have a good role in promoting the shaping of the overall sense of urban public space, the grasp of spatial scale, and the interaction between people and the environment [41]. In addition, they play an important role in shaping the city’s image and improving its taste. Based on the three goals of providing users with safe and accessible places, fair use rights, and convenient transportation services. Xuhui Runway Park is also designed with landscape facilities, such as a guidance system, lighting system, security booths, barrier-free ramps, and traffic facilities (Figure 8).

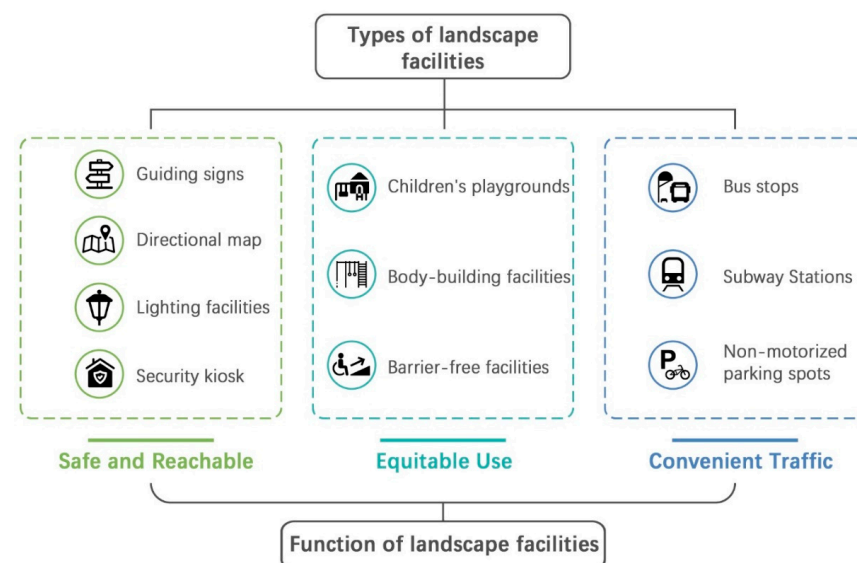


Figure 8. Types and functions of landscape facilities.

3.3. Construction Stage

Before construction, SITES required the integrated design team to clearly communicate and follow through with the sustainable construction plan to the construction team. Construction pollutants had to be controlled and treated during construction, air quality protected, and waste materials recycled. After construction, vegetation and soil disturbed by construction had to be restored.

During the construction of Xuhui Runway Park, Zhu Yu, the landscape design supervisor of Sasaki in charge of the project, followed up the construction quality and guided the construction technology, for example, the construction of the rain garden overflow structure and the protection measures of the original concrete runway. The construct team also properly handled and disposed of the construction waste on the site in strict accordance with the relevant Shanghai regulations. However, since the concept of sustainable construction and related regulations were not yet widespread, the project was only able to implement sustainable design and control and standardize the disposal of construction waste in a relatively basic way. It was difficult to implement specific management measures to protect air quality and reduce dust during construction. As a result, the Xuhui Runway Park project scored only 29% in the “Construction” section.

The design–build integrated model is an organizational and management approach that entrusts both design and construction to a single general contractor [42]. In the construction process of Xuhui Runway Park, the project manager demonstrated excellent coordination skills, effectively overseeing the construction process, crucial milestones, construction procedures, and the achieved results [43]. This signifies a successful integration of design into construction [44]. However, during the construction phase, there was insufficient permeation of construction into design. Issues such as the construction team’s lack of understanding of the designer’s true design concepts and intentions, misconceptions about construction drawings, and a lack of communication between the two parties before construction were evident. Therefore, to achieve sustainable landscape construction, it is essential not only for the design team to have comprehensive control and guidance over the project but also for the construction team to actively participate in construction drawing design. They should enhance their sustainability awareness, understand the designer’s intentions, comprehend design drawings, engage in discussions with designers about the feasibility of solutions, and propose effective construction suggestions. This collaborative effort aims to optimize resource allocation, avoid design defects, and minimize subsequent design changes (Figure 9).

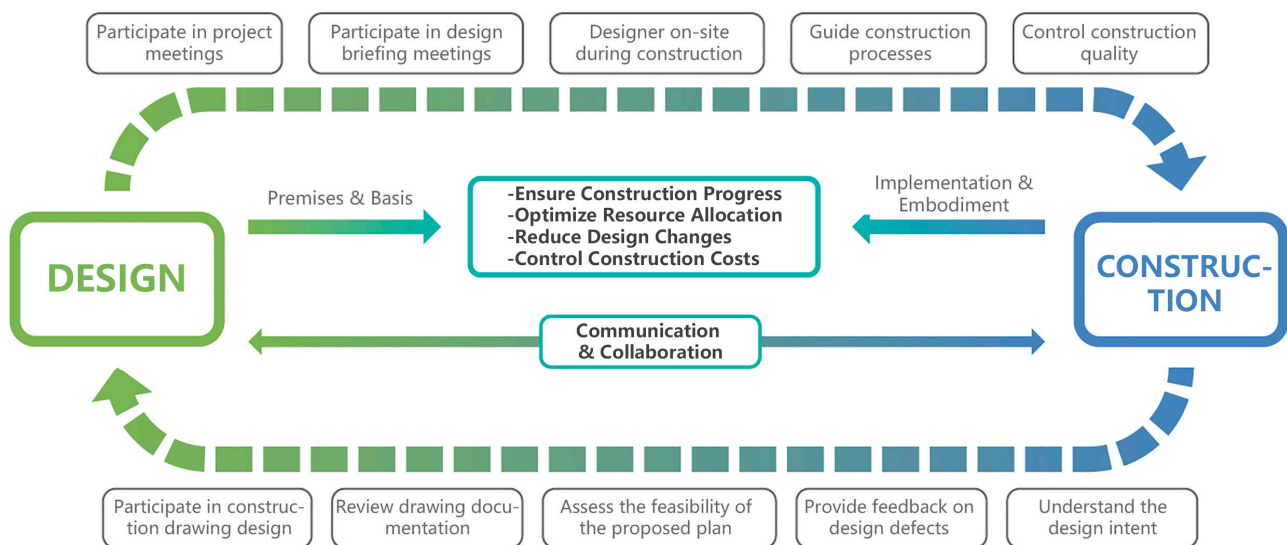


Figure 9. Design–construction integration relationship model diagram.

3.4. Operations and Use Stage

3.4.1. Operation and Maintenance

In the “Operation and Maintenance” section, SITE requires projects to explicitly develop a sustainable site maintenance plan during the schematic design phase; realize the site’s long-term potential to provide ecosystem services through a range of maintenance strategies; and achieve sustainable performance goals of resource conservation, pollution reduction, and waste minimization.

The operation and maintenance team of Xuhui Runway Park developed site maintenance and management plans. They created detailed regulations for the maintenance and management of security, sanitation, greening, maintenance, water, and other departments in garbage sorting and recycling, vegetation maintenance, and water body maintenance. They also developed a relevant mobile application, which provides a platform for information exchange between personnel in each department and upper management and between personnel in each department. It is conducive to solving site problems efficiently and maintaining a good and sustainable landscape effect. Mr. Li, the security officer of Xuhui Runway Park, stated: *There are sanitation workers who come to clean up the garbage on the site every day, and personnel from the greening company also come regularly to prune the branches of trees. During our patrols every day, if we notice that plants in the park need pruning or if certain facilities are damaged, we take photos and report them through the APP. Then, the contracting party will dispatch personnel for greening or maintenance to handle the situation.*

3.4.2. Education and Performance Monitoring

In the “Education and Performance Monitoring” section, SITES requires projects to promote education for disseminating sustainability concepts, to monitor and document reporting on sites over time, and to provide a case study basis for developing a sustainable site knowledge system.

Xuhui Runway Park has carried out a lot of online media promotion work in the role of education and science popularization of the project, and the landscape performance monitoring work is in the initial stage.

Currently, in mainland China, the popularization and interpretation of landscapes in general urban parks, excluding specialized parks like zoos and botanical gardens, are still in the early stages. The types and forms of nature education activities conducted are relatively limited, lacking attractiveness [45]. In addition to providing leisure and recreational experiences, urban green space construction in China should place greater emphasis on serving as professional venues for citizens and students to conduct nature classes [46]. This can contribute to the healthy growth of contemporary children and adolescents, enhance the overall public’s knowledge of nature, and foster awareness of sustainable development.

4. Discussion

4.1. Applicability of SITES in China

SITES is grounded in theories such as ecosystem services and the entire lifecycle, and holds universal values in landscape projects globally. On the technical indicators level, it demonstrates applicability to landscape projects outside the United States. Through a case analysis of Xuhui Runway Park, it is observed that, for urban green space construction in China, the applicability of SITES manifests in the following aspects:

(1) Focus on the “site” scale

SITES is a comprehensive sustainable landscape evaluation system that can be applied to all types of sites in different regions and scales. Unlike previous evaluation methods that relied on urban planning and architectural design, SITES takes the “site” with multiple attributes such as geography, nature, and culture as the evaluation subject, comprehensively and systematically focusing on landscape construction activities on the site.

(2) Cover the entire lifecycle

The prerequisites and scoring criteria in SITES cover the entire lifecycle process of landscape architecture projects, from initial site selection and assessment, to mid-term site design and construction, and later operations and maintenance. In addition, the SITES evaluation system also emphasizes education and performance monitoring, emphasizing the role of the site in sustainable public education.

(3) Set “threshold” conditions

In the SITES certification scoring, prerequisites are essential for project certification, while scoring points are not mandatory. This tiered evaluation structure encourages projects to flexibly and creatively design and develop in terms of sustainability, rather than being confined to specific implementation methods. The differentiated evaluation structure allows the SITES assessment system to be flexibly applied to landscape projects of different types and scales.

(4) Global uniform standards

The current global version of SITES and reference guide are the same. This global unified scoring and rating system helps certification organizations to uniformly measure standards, compare projects with each other, and demonstrate the exemplary and incentive effects of excellent projects [47].

4.2. Limitations of SITES in China

While the SITES assessment system has some applicability in the construction of urban green spaces in China, there are still certain limitations.

(1) Incomplete alignment with Chinese standards and specifications

SITES faces challenges of incomplete alignment with Chinese standards and specifications. The rain garden design at Xuhui Runway Park faced difficulties because there were no equivalent indicators in China for the concept of the percentage of rainfall events, as used by SITES. In contrast, the Chinese “Technical Guidelines for Sponge City Construction” tends to utilize the annual runoff control rate as an evaluation criterion. Similar challenges are observed in the concept of Vegetative and Soil Protection Zones (VSPZ). Furthermore, in the construction phase, SITES assesses projects’ air quality protection based on criteria for harmful gas emissions from diesel engines, a concept that has not been extensively studied in China, among other factors.

(2) Imbalanced Scoring Weightings

The scoring weightings in SITES exhibit a certain imbalance, limiting its comprehensive application in the context of urban green space construction in China. The scoring system in SITES places relatively lower emphasis on economic and social benefits [47]. The overall system is inclined towards the assessment of ecological benefits [27]. Additionally, SITES places greater emphasis on the design phase, with relatively fewer evaluations during the construction and operation maintenance phases. This may result in SITES facing challenges in comprehensively addressing the actual needs of later stage operations and social benefits in Chinese urban green space projects.

(3) Insufficient Policy Support

SITES certification lacks relevant government welfare policy support in the construction of urban green spaces in China. In comparison to the construction industry, green building in China has received strong support from both the central and local governments, evident in a series of financial incentives and support policies. Project manager Zhu Yu said: *There are currently no similar financial incentive measures for SITES certification in China, resulting in SITES certification applications being more of a voluntary act by the property owner.* In this process, the registration and certification fees, as well as third-party consulting service fees, are borne by the property owner. This is also one of the reasons for the limited applicability of SITES certification in China.

(4) Limited Promotion

In current Chinese architecture and building projects, landscaping tends to receive less attention. Typically, it is an aspect considered later in the design process, especially in real estate developments. Ms. Zihan Zhou, from the Market Development and Transformation Department of USGBC North Asia Regional Office, said: *Compared to LEED, the awareness, application and promotion of SITES in China is still limited.* This highlights the challenges faced in promoting SITES in the country, emphasizing the need for increased publicity and advocacy to enhance its industry recognition and adoption.

5. Conclusions

5.1. Research Conclusions

In Chinese research on the SITES evaluation system, the system is often utilized as a framework for design studies, with its indicators serving as design strategies or methods. However, there is a lack of discussion on the applicability of the SITES evaluation system to urban green space construction in China. This study took Xuhui Runway Park, a representative case of SITES certification in China, as an example. It systematically described SITES-certified Chinese projects in four stages: project planning and programming, schematic design, construction, and operations and use. This study analyzed specific methods to meet the requirements of the SITES system for this park and summarized the corresponding sustainable landscape design strategies for urban green space projects in China. By exploring the role of SITES in guiding urban green space construction in China and addressing existing challenges, this study supplemented and improved the research on the applicability of the SITES evaluation system to Chinese urban green space construction. It also provided theoretical and empirical support for design research based on the SITES evaluation system, enhancing the scientific nature and rationality of the process of sustainable landscape design research. The conclusions can be summarized as follows:

- (1) SITES requirements for site sustainability cover the entire lifecycle of a landscape project, including the four stages of project planning: project planning and programming, schematic design, construction, and operations and use. ① In the project planning and programming stage, the project should reasonably select its location, form a government-led comprehensive design team, carry out the investigation and evaluation based on site characteristics and user needs, and encourage public participation. ② In the schematic design stage, the project should put forward clear and feasible design concepts and strategies for landscape design elements such as water, soil, vegetation, materials, and space. ③ In the construction stage, the project should adopt the design–construction integration model to realize the penetration of design and construction. ④ In the operations and use stage, the project should formulate and implement a sustainable management and maintenance plan, improve work efficiency by optimizing the traditional work model in combination with new media technology, give full play to the natural education function of the site through online media publicity, popular science facilities, activity planning, and other forms, and carry out long-term landscape performance monitoring.
- (2) SITES is a mature and effective sustainable landscape evaluation system, which has full-cycle guiding significance for urban green space construction projects in China. The SITES rating system can not only provide designers with a clear reference for sustainable design strategies, and serve as a basis for construction and operation and maintenance organization to formulate work plans, but also provide the government, owners, and the public with evaluation criteria for review, supervision, and evaluation. SITES can promote the standardization and innovative development of the planning and design process of landscape architecture project in China. Meanwhile, the dissemination and promotion of the concept of sustainable development by SITES itself also contributes to the improvement and enhancement of the public's sustainable awareness.

- (3) SITES needs to improve the setting of evaluation indicators and increase promotion efforts to achieve wider application in China. The SITES rating system has problems such as incomplete indicator setting and limited promotion in urban green space projects in China. In response to these two main problems, first of all, SITES itself needs to increase the evaluation indicators of landscape economic and social benefits, and increase the score proportion of the construction and operation and maintenance parts. Then, the government, certification agencies, academia, designers, and the public need to work together to increase the publicity and promotion of sustainable landscapes and SITES, and promote the establishment of a sustainable site evaluation system that adapts to the actual conditions in China.

5.2. Research Limitations

- (1) Due to the existing protection of intellectual property rights by the company, some of the materials related to the Xuhui Runway Park case (such as the SITES certification report and complete design documents) were not fully accessible. Therefore, the description of the project design is mainly based on the project introduction information available on the Sasaki website and interviews with the project manager. It is not possible to present a comprehensive and in-depth understanding of all the ideas during the design stage of the project. Instead, the focus is more on describing the actual landscape effects after construction.
- (2) SITES certification in China is still in its infancy, with only three projects having received formal certification. Considering objective factors such as data collection, project openness, and permission for public disclosure, the only project eligible for on-site research is the Xuhui Runway Park in Shanghai. The study has focused comprehensively on this single case, preventing the possibility of conducting cross-case analysis with multiple cases.
- (3) SITES is a comprehensive evaluation system that assesses the sustainability of all stages in the lifecycle of landscape projects, involving a plethora of professional national standards or standard systems. Due to the limited scope of this paper, it is not feasible to delve into each evaluation criterion in SITES during the analysis of its applicability in urban green space construction in China. Consequently, specific standard recommendations from SITES applicable to China cannot be provided.

5.3. Research Outlook

In conclusion, this study has delved into the sustainable evaluation of urban green space projects, particularly focusing on the SITES rating system and providing insights into certified projects in China. Future research directions can be outlined as follows. Firstly, there is a need for additional case studies as the trend towards SITES certification grows among various stakeholders. Increased project sharing by owners will contribute to a more robust multi-case study approach, enhancing the validity of research hypotheses and conclusions. Secondly, research perspectives can be expanded to explore user experiences in SITES-certified projects, considering the multifaceted functions of urban green spaces. Investigating the correlation between sustainable landscape design, user behavior preferences, and visual preferences will further elucidate the social benefits provided by sustainable landscapes. Lastly, future collaboration between relevant government bodies and academic institutions can facilitate a detailed exploration of the 67 evaluation indicators in the SITES rating system. By aligning with existing national standards or technical specifications in China, there is an opportunity to establish a tailored Chinese Sustainable Sites Evaluation System applicable to urban green space projects.

Author Contributions: Conceptualization, G.L.; Methodology, G.L.; Formal analysis, X.Z.; Investigation, X.Z.; Resources, G.L. and X.Z.; Data curation, X.Z. and X.H.; Writing—original draft, G.L. and X.Z.; Writing—review & editing, X.H.; Visualization, X.Z. and X.H.; Supervision, G.L. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the National Natural Science Foundation of China, grant no. 52378054.

Data Availability Statement: The original contributions presented in the study are included in the article, further inquiries can be directed to the corresponding author.

Acknowledgments: The authors would like to sincerely thank Yu Zhu and Zihan Zhou for their detailed information sharing and invaluable assistance during the interview process. Additionally, the authors are grateful to their colleagues Ziqian Huang, Yuchen Luo, Chenghong He, Yinan Zhao at South China University of Technology for their valuable suggestions for the paper.

Conflicts of Interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

1. WCED. *Our Common Future*; World Commission on Environment and Development: Oxford, UK, 1987.
2. UN-United Nations. Sustainable Development Goals (SDGs). 2015. Available online: <https://sdgs.un.org/goals> (accessed on 1 March 2023).
3. Psara, O.; Fonseca, F.; Nisiforou, O.; Ramos, R. Evaluation of Urban Sustainability Based on Transportation and Green Spaces: The Case of Limassol, Cyprus. *Sustainability* **2023**, *15*, 10563. [CrossRef]
4. Kates, W.; Clark, C.; Corell, R.; Hall, J.M.; Jaeger, C.C.; Lowe, I.; McCarthy, J.J.; Schellnhuber, H.J.; Bolin, B.; Dickson, N.M.; et al. Environment and development. *Sustainability science. Science* **2001**, *292*, 641–642. [CrossRef] [PubMed]
5. Wu, J. Landscape sustainability science: Ecosystem services and human well-being in changing landscapes. *Landsc. Ecol.* **2013**, *28*, 999–1023. [CrossRef]
6. Zhou, B.-B.; Wu, J.; Anderies, J.M. Sustainable landscapes and landscape sustainability: A tale of two concepts. *Landsc. Urban Plan.* **2019**, *189*, 274–284. [CrossRef]
7. Wu, K. *Landscape Evaluation Model Study—And Beijing Olympic Park Landscape Evaluation*; Nanjing Forestry University: Nanjing, China, 2009; pp. 1–6.
8. Alyami, S.H.; Rezgui, Y. Sustainable building assessment tool development approach. *Sustain. Cities Soc.* **2012**, *5*, 52–62. [CrossRef]
9. Rakha, T.; Moss, T.W.; Shin, D. A decade analysis of residential LEED buildings market share in the United States: Trends for transitioning sustainable societies. *Sustain. Cities Soc.* **2018**, *39*, 568–577. [CrossRef]
10. Smith, R.M. Planning for urban sustainability: The geography of LEED[®] Neighborhood Development[™] (LEED[®]-ND[™]) projects in the United States. *Int. J. Urban Sustain. Dev.* **2014**, *7*, 15–32. [CrossRef]
11. USGBC. LEED 2009 for Neighborhood Development Rating System. Development. 2014. Available online: <http://www.usgbc.org/leed> (accessed on 24 October 2023).
12. Pedro, J.; Silva, C.; Pinheiro, M.D. Scaling up LEED-ND sustainability assessment from the neighborhood towards the city scale with the support of GIS modeling: Lisbon case study. *Sustain. Cities Soc.* **2018**, *41*, 929–939. [CrossRef]
13. Talen, E.; Allen, E.; Bosse, A.; Ahmann, J.; Koschinsky, J.; Wentz, E.; Anselin, L. LEED-ND as an urban metric. *Landsc. Urban Plan.* **2013**, *119*, 20–34. [CrossRef]
14. American Society of Landscape Architects. What Are Sustainable Landscapes? 2023. Available online: <https://www.asla.org/sustainablelandscapes/about.html> (accessed on 24 October 2023).
15. Yang, Y.; Lin, G.-S. The Development, Connotations, and Interests of Research on Landscape Performance Evaluation for Evidence-based Design. *Landsc. Archit. Front.* **2020**, *8*, 74. [CrossRef]
16. Sun, Y. SITES green building certification system practice base on one city park project. *Green Build.* **2015**, *7*, 12–15+19.
17. Ismaeel, W.S.E. Using SITES for Sustainable Rehabilitation of Cultural Heritage Landscape Areas; Case of Giza Zoo. In *Advanced Technologies for Sustainable Systems*; Baheir-El-Din, Y., Hassan, M., Eds.; Springer International Publishing: Berlin/Heidelberg, Germany, 2017; Volume 4, pp. 51–61.
18. Lee, H.-S. A Study on Sustainable Outdoor Design Strategies and Assessment System through Analysis of SITES Certified Projects. *J. Korean Inst. Landsc. Archit.* **2016**, *44*, 56–64. [CrossRef]
19. Ndubisi, F.; Whitlow, H.; Deutsch, B. Landscape Performance: Past, Present, and Future. *Landsc. Archit.* **2015**, *1*, 40–51.
20. Jia, P.; Guo, Y. Comparative Analysis on the U.S. Sustainable Site Assessment System SITES V2 and SITE V1. *Eco-City Green Build.* **2014**, *4*, 66–71.
21. Steiner, F.; Pieranunzi, D. The Sustainable Sites Initiative[™] New Prospects for Urban Landscapes. *Eco-City Green Build.* **2014**, *4*, 30–39.
22. Sustainable SITES Initiative. CERTIFICATION_SITES Rating System. 2023. Available online: <https://www.sustainable-sites.org/certification-guide> (accessed on 24 October 2023).
23. General Office of the State Council, RPC. *China Agenda 21*; China Environmental Science Press: Beijing, China, 1994; pp. 1–15.
24. Ministry of Housing and Urban-Rural Development of the People's Republic of China. *National Garden City Series Standards. Urban Construction*; Ministry of Housing and Urban-Rural Development of the People's Republic of China: Beijing, China, 2016; No. 235.

25. GB/T 51345-2018; Assessment Standard for Sponge City Construction Effect. Ministry of Housing and Urban-Rural Development of the People's Republic of China: Beijing, China, 2018.
26. GB/T 50378-2019; Assessment Standard For Green Building. Ministry of Housing and Urban-Rural Development of the People's Republic of China: Beijing, China, 2019.
27. Dai, D.-X. Introduction to the Sustainable Sites Initiative (SITES) in the Action Plan for Sustainable Site Design. *Huazhong Archit.* **2014**, *32*, 12–17.
28. Zhang, S.; Song, Y.; Wang, L. Designing Our Future Landscape: Research Status and Inspiration of the Sustainable Sites Initiative TM(SITETM) of America. *Ecol. Econ.* **2015**, *31*, 28–35.
29. Ye, X.; Dong, L. Study on Rating System of the Sustainable Sites and its Application. Chinese Society of Landscape Architecture. In Proceedings of the 2013 Annual Conference of the Chinese Society of Landscape Architecture, Wuhan, China, 10 October 2013; p. 3.
30. Wu, J.; Liu, Y.; Wang, W.; Tang, Q. The Reference Role of SITES Indicator Assessment System in Urban Ecological Civilization Construction. In Proceedings of the 2019 Annual Conference of the Chinese Society for Environmental Sciences (Volume 1), Xi'an, China, 23–25 August 2019; pp. 102–111.
31. Wang, J.; Zhang, Y. Design Evaluation of Sustainable Urban Brownfield Regeneration: A Case Study of SITES System. In Proceedings of the 2021 China Urban Planning Annual Conference (Urban Renewal), Nanjing, China, 11–13 September 2021; pp. 242–253.
32. Sun, N.; Sun, G. Comparative analysis research on the sustainability assessment indicator systems of landscape architecture. *Landsc. Archit. Acad. J.* **2019**, *7*, 14–19.
33. Wang, N. Representativeness or Typicality?—Properties of the case and the logical basis of the case study methodology. *Sociol. Stud.* **2002**, *5*, 123–125.
34. Sustainable SITES Initiative. PROJECTS. 2023. Available online: <https://www.sustainablesites.org/projects> (accessed on 24 October 2023).
35. Yin, R.K. *Case Study Research: Design and Methods*, 5th ed.; SAGE Publications: Southend Oaks, CA, USA, 2013.
36. Sustainable SITES Initiative. Case Studies_Runway Park. 2023. Available online: https://www.sustainablesites.org/sites/default/files/legal/Case%20Studies_Runway%20Park.pdf (accessed on 24 October 2023).
37. Sasaki Associates. Xuhui Runway Park. 2023. Available online: <https://www.Sasaki.com/zh/projects/xuhui-runway-park/> (accessed on 24 October 2023).
38. Zhou, C. Former Airplane Runway Transforms into Citizens' 'Fitness Track'. *Wen Hui Bao*, 28 December 2021; (001).
39. Jia, L.; Huo, D.; Lin, Q. Reflection on the Conservation and Regeneration of Industrial Remains in the Huangpu Riverside Area in Shanghai. *ArchiCreation* **2020**, *3*, 237–243.
40. Liu, K. Research on Landscape Renewal Design of Waterfront within Old Industrial District Based on Sustainable Concept—A Case study of Shanghai Yangpu Riverside Park. *Landsc. Archit. Acad. J.* **2020**, *8*, 74–80.
41. Yang, J. Fuzzy Syntheses Evaluation Research on the Quality of Environmental Facilities in Urban Public Spaces. *J. Wuhan Univ. Technol. (Soc. Sci. Ed.)* **2013**, *26*, 676–682.
42. Zhu, X. Integrated Practice of Landscape Design and Construction. *Landsc. Archit. Acad. J.* **2014**, *3*, 82–84.
43. Li, D.; Zheng, X. Research on the Development of Design and Construction Integration in China's Construction Industry. *Constr. Archit.* **2009**, *7*, 30–35.
44. Xu, Y. The Connection Process of Integrated Landscape Design and Construction. *City House* **2019**, *26*, 110–113.
45. Wu, Y.; Cheng, J. Discussion on the Current Situation of Environmental Interpretation and Environmental Education in Chinese Nature Parks. *Chin. Landsc. Archit.* **2011**, *27*, 17–20.
46. Yan, S.; Cao, H. The Natural Education Function of Urban Parks and Its Implementation Approaches. *Chin. Landsc. Archit.* **2018**, *34*, 48–51.
47. Shen, J.; Long, R.; Chen, J. The Enlightenment of American Stormwater Management Evaluation Criteria (LEED-ND, SITES, LPS) on Performance Assessment of Sponge Cities in China. *Landsc. Archit.* **2019**, *26*, 81–86.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.