

The Standards for Securing Quantity and Quality Green Space

I. Basic approach when tackling initiatives to secure urban green space

Amid the changing social situation found in cities, there is a need for proactive responses to resolve social issues in climate change countermeasures, preservation of biodiversity, and enhanced well-being.

Urban green spaces are expected to fulfill a variety of functions in response to such issues as solutions based on green infrastructure and nature (Nature-based Solutions (NbSs)), including greenhouse gas absorption, mitigation of the heat island phenomenon, rainwater runoff control, securing habitat and growth environments for wildlife, providing sites for environmental education, improvement of health, formation of regional communities, creation of better landscapes, and formation of regional history and culture.

However, it has been noted that the enhancement of urban green space in Japan is relatively limited in extent by international standards, and furthermore that the amount of green space is on the decline in many Japanese cities.

For these reasons, it is vital to develop better urban environments by securing more urban green spaces in terms of both quality and quantity, and it is essential that Japan promote initiatives by private business operators to secure urban green spaces in addition to public initiatives. Besides, it is also vital to incorporate private-sector investment in the environmental, social, and governance (ESG) domains, a trend that has grown at the global level in recent years, into urban green spaces.

The purpose of the Standards for Securing Quantity and Quality Green Space (hereinafter, “the Standards”), based on the provisions of the Urban Green Space Act (Act No. 72 of 1973; hereinafter, “the Act”), Article 87, is to promote more effective initiatives by stipulating a certain direction for those matters which should be tackled or taken into consideration when resolving issues in areas such as climate change countermeasures, preservation of biodiversity, and enhanced well-being, in relation to the initiatives undertaken by private business operators with the aim of securing urban green spaces (hereinafter, “green space securing projects”). Although these Guidelines envisage green space securing projects as primarily being implemented by private business operators, they also cover the implementation of such projects by public-sector bodies.

With regard to the certification of plans for securing prime green space as stipulated in Article 88, Paragraph 4 of the Act, the screening for conformity to the Standards shall be conducted in accordance with the Implementation Guideline, which is separately stipulated based on the Act and the Standards. Certification shall be granted when the plan is found to be in conformity with the Implementation Guideline.

The Standards shall be revised as necessary on the grounds of changes in the social situation inside or outside Japan, technological innovations and so forth.

II. Matters which should be tackled and taken into consideration by green space securing projects operators

Operators should tackle and take into consideration the following matters within an appropriate time-

frame and adapted to local conditions when implementing green space securing projects, in order to ensure that green spaces fulfill the various functions inherent to such spaces and help to resolve the various issues facing cities. Of these matters, i to iv and vii concern matters for which not every item needs to be fulfilled, and to which operators should respond as needed in line with local conditions. Finally, there are also matters other than those set out below which should be tackled and taken into consideration as necessary, which correspond to advanced initiatives aimed at resolving the issues facing cities.

i. Securing both the quality and quantity of green space

In order to respond to various issues in areas such as climate change countermeasures, preservation of biodiversity, and enhanced well-being, reversing the decline of green spaces and working to enhance the quality of such spaces are vital measures for developing greenery-rich cities.

- Operators must secure green spaces at or above a certain scale, and develop and manage these so as to improve their quality, to ensure that green spaces fulfill the functions inherent to such spaces and realize a reasonable level of effects for the city, in order to secure urban green spaces in terms of both quality and quantity. Furthermore, operators must develop and manage the overall land used in green space securing projects (hereinafter, “target land”) so as to ensure that the proportion of target land occupied by green space is as high as possible, based on the social responsibilities borne by such operators holding a certain amount of land.
- Operators must develop and manage target land so as to ensure that there is no loss of the natural environment compared to the situation before project implementation, during the creation and preservation of green spaces, in order to realize the so-called Nature Positive vision (namely, to “halt and reverse biodiversity loss to help set the necessary trajectory for nature”) to 2030.

ii. Climate change countermeasures

Progressive global warming caused by the growth in greenhouse gas emissions is having grave effects in terms of natural disasters, rising sea levels, ecosystems, the agriculture, forestry and fisheries industries, urban lifestyles, economic activities and other areas. This means that when conducting green space securing projects, it is essential to respond to climate change by absorbing and fixing carbon dioxide, reducing emissions as mitigation measures, and carrying out heat countermeasures and flooding countermeasures as adaptation measures, engaging in initiatives aimed at resource recycling.

(1) Greenhouse gas absorption and fixation

- Because trees possess the function of absorbing and fixing CO₂ via photosynthesis, operators must plant tall trees which can serve as carbon sinks, and cultivate these appropriately, when conducting green space securing projects.

- As wood serves as a store of carbon absorbed by forests, when conducting green space securing projects, operators must proactively make use of wood when establishing facilities relating to the use of such spaces and other purposes.

(2) Greenhouse gas emission reduction

- Operators must effectively develop and manage rooftop and wall greenery when conducting green space securing projects, because covering the outside of buildings and paved surfaces with plants helps to prevent rising surface temperatures and heat retention, and reduces use of air conditioning during both daytime and nighttime, functions which can reduce CO₂ emissions.
- Operators must aim to reduce CO₂ emissions from the materials they use, not only at the usage stage but throughout the entire lifecycle including material production, distribution, construction, operation and so forth, when conducting green space securing projects.

(3) Heat countermeasures

- Green spaces possess functions which can mitigate excessive heat in urban environments, including the heat island phenomenon, by improving ground coverage and by acting as sources of cooler temperatures which can introduce cooler air into the surrounding environment, and by forming wind paths which can generate and maintain cool breezes in cities. Trees possessing crowns can also provide countermeasures against heat stroke in the spaces where people walk and spend time, by providing shade and reducing sunlight exposure. For these reasons, operators must develop and manage green spaces effectively so as to deliver heat countermeasures, based on the state of the surrounding area, when conducting green space securing projects.

(4) Flooding countermeasures

- Green spaces are expected to provide rainwater discharge control functions, because the configuration of such spaces allows temporary storage and underground infiltration of rainwater. For this reason, operators must develop and manage green spaces so as to ensure the appropriate configuration and placement for effectively fulfilling these rainwater discharge control functions, when conducting green space securing projects.

(5) Resource recycling

- Initiatives based on the 3Rs (reduce generation of waste, use recycled resources, reuse resources) + Renewables (shift towards use of biomass and renewable resources) of waste management that aim to achieve a circular society can also contribute to reducing greenhouse gas emissions; therefore, operators must proactively make effective use of recycled materials and other resources when conducting green space securing projects.

iii. Preservation of biodiversity (Conservation and recovery of natural capital)

Ecosystems which are supported by rich biodiversity contribute to human welfare, and the natural benefits thereof bring material wealth to human lifestyles; on the other hand, human activities are believed to be causing continuing deterioration of biodiversity and ecosystem

services around the world. For this reason, operators must preserve biodiversity and ensure the conservation and recovery of natural capital, by reducing excessive burdens on natural capital and ensuring that green spaces serve as habitat and growth environments for the wildlife that supports the regional ecosystem.

(1) Conservation of water resources

- Water resources are essential for the life of living creatures; as securing such resources appropriately is essential, operators must carry out initiatives aimed at reducing water usage while ensuring appropriate cultivation of plants, when conducting green space securing projects.

(2) Preservation of a diverse habitat and growth environment

- Green spaces possessing hierarchical structures comprising a diversity of plants of different heights, including tall tree layers, shrub layers and herb layers, create habitats for a variety of organisms due to the diversity of spatial structures created. For this reason, operators must develop and manage green spaces so as to ensure formation of hierarchical structures, when conducting green space securing projects.
- In general, cohesive green spaces of a certain scale and above are essential for ensuring that organisms can maintain stable groups, and the greater the scale, the more effective a green space is from the perspective of preserving biodiversity. For this reason, operators must establish cohesive green spaces that are as large as possible, when conducting green space securing projects.
- Green spaces comprising a number of different natural environments such as woodland, grassland, and waterfront areas provide habitats for a diverse range of animals. For this reason, operators must develop and manage green spaces so as to ensure a number of different natural environments within a single green space, and create configurations which facilitate movements of animals between such spaces, when conducting green space securing projects.
- Forming spaces where animals can feed and reproduce, and facilitating movements between spaces, are essential for preserving habitat and growth environments for a variety of animals and plants; therefore, operators must carry out initiatives aimed at forming good habitat and growth environments, based on the ecology of the animals and plants in question, when conducting green space securing projects.

(3) Harmony with the surrounding environment

- Environments where indigenous plants grow are vital habitats for indigenous animals, and therefore essential for preserving regional ecosystems; therefore, operators must make use of plant life rooted in the region in question when conducting green space securing projects.
- In cities where the green spaces serving as habitat and growth environments for animals and plants are isolated from each other, this can make it hard for animals and plants to have exchanges within their own groups and cause the loss of opportunities for exchanges with other groups. This situation makes it difficult to ensure the group numbers required for

reproduction, resulting in extinction of or decline in animal and plant species within cities and losses in biodiversity. Therefore, to preserve biodiversity in cities, it is essential to form ecosystem networks that provide ecological and spatial connections between habitats and ensure opportunities for the easy movement of animals and plants and for exchanges among groups. For this reason, operators must develop and manage green spaces so as to form ecosystem networks which work in harmony with the surrounding environment, when conducting green space securing projects.

(4) Reduction of the impact on the ecosystem

- Invasive alien species change the nature of regional ecosystems and have a major impact on native species; therefore, operators must carry out initiatives aimed at preventing harm from invasive alien species, when conducting green space securing projects.
- The overuse of chemical pesticides and chemical fertilizers causes declines in biodiversity; therefore, operators must carry out initiatives for reducing the volumes of chemical pesticides and chemical fertilizers used when conducting green space securing projects.
- Chemical substances including plastics can have impacts on ecosystems; therefore, operators must manage materials that contain chemical substances appropriately when conducting green space securing projects.
- There are concerns that the procurement of materials from inside and outside Japan can have impacts on the conservation of natural environments; therefore, operators must confirm the legality and sustainability of any materials used when conducting green space securing projects.

(5) Implementation of environmental education

- Increasing knowledge and awareness among the public about the importance of biodiversity is essential for encouraging changes in behavior which assist with preserving biodiversity. However, it has been noted that residents in urban areas in particular have few opportunities to come into contact with nature during their daily lives, and that increasing numbers of children do not know how to live alongside nature, and are losing opportunities to experience nature. For this reason, operators must proactively provide opportunities for environmental education about biodiversity, and opportunities for people to come into contact with nature, when conducting green space securing projects.

iv. Enhanced well-being

The importance of leading healthy and culture-rich urban lifestyles increased in the COVID-19 pandemic; moreover, promoting well-being among people of all ages is also positioned as one of the Sustainable Development Goals (SDGs). For this reason, operators must work to enhance well-being by carrying out initiatives to ensure that people of all kinds can use green spaces in safety, security and comfort, to promote physical and psychological health, and to improve the attractiveness or cultural value of regions, when conducting green space securing projects.

(1) Creating open spaces

- Operators must develop and manage spaces so as to ensure that they are used as widely as possible, to ensure that the beneficial effects of green spaces on enhancing well-being are experienced by people as much as possible, when conducting green space securing projects.
- Operators must develop and manage green spaces based on the universal design approach, including ensuring barrier-free functions, to ensure green spaces are easy for various people to use including the elderly, people with disabilities, and children, when conducting green space securing projects.

(2) Formation of secure and safe spaces

- It is essential that green spaces be secure and safe places as a foundation for enhanced well-being; therefore, operators must develop and manage green spaces so as to ensure that these are secure and safe places, including accident/crime prevention and the usage of such spaces as evacuation zones at times of disaster or buffer zones, when conducting green space securing projects.

(3) Improvement of physical and psychological health and formation of regional communities

- Green spaces can support human health through promoting physical activity, mitigating stress, encouraging relaxation, promoting mutual social exchanges among residents and strengthening community bonds; therefore, operators must develop and manage green spaces so as to promote physical and psychological health and help form regional communities as a form of societal health, when conducting green space securing projects.

(4) Creation of liveliness

- Green spaces which include trees, lawns and the like which create green shade are a factor which makes walking in urban neighborhoods more enjoyable, and such spaces can help to create spaces which become the scenes for visiting and exchanges among various people, due to the sense of comfort they create and the visual impact they make. For this reason, operators must develop and manage green spaces so as to ensure that they are comfortable and attractive places to stay and conduct exchanges, and to ensure that walkers can continuously walk through greenery-rich spaces, when conducting green space securing projects.

(5) Formation of enhanced landscapes

- Green spaces can form beautiful landscapes through their greenery-rich nature and the moisture they create, give people a sense of the changing seasons and the passage of time, and give form to the history and culture particular to a region. For this reason, operators must develop and manage green spaces so as to give form to enhanced landscapes in the target land/area, including the placement of planting which contributes to improvement of the surrounding environment, and design features based on a coherent vision, when conducting green space securing projects.

(6) Utilization of farming

- Urban farming in urban green spaces can bring fresh locally-grown agricultural produce to people, while also providing various other functions including disaster prevention, the formation of enhanced landscapes and the conservation of natural land and the environment; therefore, operators must develop and manage green sites so as to ensure the generation, conservation and utilization of urban agricultural land and agricultural spaces, when conducting green space securing projects.

v. Management and governance

Green spaces require appropriate development, ongoing monitoring and adaptable maintenance and management based on their characteristics, since, unlike artificial types of infrastructure, plants grow and produce considerable changes in the status of the space. For this reason, it is essential to have appropriate management of development, maintenance and management, and that this be supported by independent governance, to ensure reliable and continuous fulfillment of the functions possessed by green spaces, when conducting green space securing projects.

(1) Appropriate project implementation

- To ensure appropriate project implementation, operators must stipulate the purposes and goals of the project in line with the actual situation in the region, establish the project's contents in line with these purposes and goals, and appropriately ensure an implementation structure and funding plan, when conducting green space securing projects.
- Operators must take on appropriate advice from specialists concerning green spaces from the planning stages of projects onwards, and ensure appropriate deployment of experts specialized in green spaces at the implementation stage including development, maintenance and management, when conducting green space securing projects.
- Operators must ascertain the effects of green spaces resulting from the implementation of projects via ongoing monitoring, and respond appropriately based on the results thereof.

(2) Disclosure of information

- Operators must disclose information about the project, displaying this in places which are as accessible as possible to third parties, while taking into account the characteristics of the project and target land.

(3) Communication with local residents, etc.

- Operators must engage in communication with local residents etc. through explanation sessions from the conceptual stage of the project onwards, and engage in careful consensus-building with the local community, from the perspective of ensuring transparency and fairness, when conducting green space securing projects.

(4) Management of negative impacts

- Operators must consider whether the implementation of the project could have negative impacts on the environment or society, and manage the project so as to ensure measures for avoiding or minimizing such risks if they are identified, when conducting green space securing projects.

vi. Ascertaining and reflecting land and regional characteristics

Implementing projects based on the characteristics of the target land and regional characteristics is important when creating and preserving green space.

(1) Ascertaining and reflecting land and regional characteristics

- Operators must first appropriately ascertain the historical, cultural and social status and legal/administrative planning situation etc. for the target land and natural environment of the surrounding region, including any changes in land usage, set out the issues appropriately, and implement the project based on the above, when conducting green space securing projects. In particular, if the target land contains valuable natural terrain, endangered species or trees of high historical or cultural value, operators must conserve these appropriately.

vii. Enhancing the value of the region and preservation of network characteristics

Green space securing projects which make use of the functions possessed by such spaces have effects which are not limited to the target land but which extend over the surrounding region; in addition, connecting these organically in the form of a network can enhance these effects still further and improve the value of the region. For this reason, operators must develop and manage green spaces so as to fulfill the functions of green spaces which extend over wider areas and ensure network characteristics among green spaces, based on the importance of initiatives for improving regional value, when conducting green space securing projects.