

(A) Steward: The Green and Blue – Summary of concepts and strategies

Our natural capital is important to us. By adopting a holistic approach to long-term planning, we can better integrate nature into our urban spaces and consider how we can extend our natural capital even as we develop. To date, we have safeguarded and set aside 7,800 hectares of green spaces. These include four gazetted Nature Reserves, 450 hectares of Nature Parks, and identified Nature Areas. Another 200 hectares of Nature Parks will be added by 2030, and we will continue to strengthen the ecological resilience of our green spaces, as we transform Singapore into a City in Nature.

Unlike other countries with large hinterlands outside their city centres, Singapore's core habitats are spread out within the city-state. It is thus vital that we enhance the ecological connections between core habitats, to ensure that our flora and fauna thrive in our city. This requires a deeper understanding of how both greenfield and brownfield sites can contribute to ecological connectivity across the island.

We have thus developed an islandwide Green and Blue Plan as a broad spatial representation of how we seek to strengthen Singapore's long-term ecological, social and climate resilience through our green and blue spaces. The Green and Blue Plan, with its broad principles and strategies below, will be used to guide the planning and implementation of more site-specific green and blue spaces downstream.

1. To **enhance stewardship of our natural capital**, we will:

- a. Better integrate green and blue spaces within our urban fabric, guided by a science-based approach. This is done in partnership with NParks, who has conducted an Ecological Profiling Exercise (EPE) for our terrestrial, coastal and marine environments. As part of the EPE, NParks developed a combination of least-resistance pathway and agent-based modelling as ecological profiling tools, to formulate conservation strategies that support our natural ecosystems. Findings from the EPE allow us to sensitively plan and integrate nature into the planning process.
- b. Extend our natural capital and strengthen connectivity through the curation of Nature Park Networks and Nature Corridors. Based on the findings from the terrestrial EPE, key ecological corridors which connect our core (source) habitats were identified. We will subsequently study the feasibility of curating Nature Park Networks and Nature Corridors along these identified ecological corridors, where connectivity can be established through a variety of ways (e.g. parks, park connectors, nature trails, Nature Ways and greenery on urban infrastructure). A new Nature Corridor - Khatib Nature Corridor - will be added to strengthen the ecological and recreational connectivity between the Central Catchment Nature Reserve and Khatib Bongsu Nature Park. See **Annex H** for more information.

2. To **integrate green and blue spaces within our urban landscape**, we will:

- a. Creatively design our green and blue spaces to serve a variety of uses. The green and blue spaces that house Singapore's natural habitats can also support our recreational needs. For example, buffer parks and gardens around our core ecological areas will not only serve as an ecological buffer for these key sites, but also provide recreational spaces for the public to enjoy. Where feasible, we will integrate our green and blue spaces within our urban landscape to enable us to have the multi-functional use of such spaces. For example, connecting our parks and waterways creates leisure spaces for use during dry weather while doubling up to manage stormwater during wet

weather. In making multi-functional use of green and blue spaces, we can enhance ecological connectivity and improve liveability, while also optimising our limited land.

- b. Restore nature into the urban landscape. To ensure residents' access to green spaces, we plan for new parks in tandem with developments. By adding greenery to our urban structures and settings, we can improve the liveability of the space and create new mini habitats for our wildlife. URA's LUSH (Landscaping for Urban Spaces and High-Rises) scheme plays a key role in encouraging urban greenery. As we head into the next bound of our planning journey, we will be enhancing the LUSH scheme by exploring the introduction of ecologically sensitive development guidelines so that greenery in buildings can enhance ecological connectivity between key habitats. URA will partner industry partners, nature groups, academics and relevant agencies in reviewing these guidelines.

3. To **enhance climate resilience through nature**, we will:

- a. Leverage green and blue spaces to adapt to the impacts of climate change. In addition to making our buildings more comfortable to live in and providing alternative habitats for biodiversity, increased greenery in built-up areas can help reduce surface and ambient temperatures and improve comfort levels. This can help us mitigate the Urban Heat Island effect.
- b. Explore hybrid solutions that combines engineering solutions with nature-based elements. Traditional infrastructure and engineering solutions such as concrete canals, seawalls and dikes remain key to flood and coastal protection. We seek to integrate them with natural elements where feasible, so as to reap multi-functional benefits such as the creation of recreational and ecological value.

(B) A biodiversity-sensitive development approach for Springleaf

At the southern end of the Khatib Nature Corridor are the forested areas at Springleaf, home to a variety of native flora and fauna, and is a critical area along the Nature Corridor. The area bounded by Seletar Expressway, Mandai Road, and Upper Thomson Road has been partially zoned for mixed Commercial and Residential, Park, and Reserve site in URA's Master Plan since 2014. With the opening of Springleaf MRT station in 2021, the injection of dwelling units at Springleaf will help to leverage on improved accessibility in this area and meet housing demands.

To better understand the ecological context of the area, an environmental baseline study was done in 2018. A multidisciplinary team, including ecologists and landscape architects, was then engaged to explore potential ideas for sensitive development that would protect the rich biodiversity in the area. Over the last 3 years, we conducted several engagement sessions early in the planning exercise to seek inputs from industry experts, academics, and nature and heritage groups.

A housing estate with rich biodiversity

The upcoming mixed-use development in Springleaf will not only meet housing needs but ensure that its rich biodiversity is protected, thereby strengthening the ecological connectivity along the Khatib Nature Corridor. The key planning and development strategies are listed below.



Figure 1: Balancing development needs with nature conservation through sensitive design and planning

- a. Significant biodiversity-sensitive areas in the forests at Springleaf will be conserved, and the immediate surroundings will be retained as an ecological buffer to facilitate ecological connectivity.

- b. There are plans to conserve parts of the former Seletar Institute and Nee Soon Post Office buildings, which can be integrated into future developments.
- c. Retained areas will be safeguarded as a Nature Park (New Nee Soon Nature Park) to provide more nature-based recreation.
- d. Developments will take place on disturbed grounds to capitalise on the newly opened Springleaf MRT station
- e. Development building footprints will be kept small to minimise habitat loss.
- f. Buildings will be designed with greener facades with bird-friendly features to minimise bird strikes.
- g. Active, Beautiful, Clean (ABC) water design features will be integrated into waterways and drainage infrastructure to maintain hydrological integrity.
- h. Developments will be carried out in phases for monitoring of environmental impacts to strengthen the ecological resilience of the area.

Based on these ideas, an Environmental Impact Assessment (EIA) was conducted subsequently in 2020 to understand the potential impacts. These findings will help to guide URA in developing proposals for the future Springleaf precinct. The full EIA report based on the consultant's conceptual ideas is available on URA's website [here](#). Members of the public may provide feedback from 6 June 2022 to 4 July 2022.