

How can an older botanical garden in the densely built-up landscape develop sustainably with the urban renewal?—A case of Shanghai Botanical Garden

T. Zhang^{1,2}, W. Yan^{1,2*}, Y.E. Xiao^{1,2}, J.K. Guo^{1,2}, and T. Li³

¹Shanghai Botanic Gardens, Shanghai, China

²Shanghai Engineering Research Center of Sustainable Plant Innovation, Shanghai, China

³Shanghai Tongji Urban Planning and Design Institute Co., LTD. Shanghai, China

*Corresponding author email: yanw816@163.com

Keywords: Megacity behemoth, Shanghai Botanical Garden, symbiosis of city and garden, urban biodiversity, urban renewal

Arboreta and botanical gardens, apart from being important green lungs in urban ecosystems, also serve as refugia for native biodiversity and play an essential role in the ex-situ conservation of plants. However, many older arboreta and botanic gardens are now engulfed in big sprawling cities and are at risk of being severely fragmented from wilderness due to urbanization. The Shanghai Botanical Garden is a classic example of this predicament, located in the high-density district of a large city, Shanghai. Acting on the vision that a city should be built for the people, the garden was opened to the public free of charge two years ago. The 80-hectare garden is extremely popular and receives 3.8 million visitors annually. In addition, the garden is applying to become a National Botanical Garden under the National Strategy for Chinese Biodiversity Conservation. One of the future goals of Shanghai Botanical Garden, apart from enhancing ex-situ conservation efforts, is to provide high-quality services catering to the high volume of visitors. How can a garden like Shanghai Botanical Garden in a densely built-up landscape develop sustainably in the urban renewal while balancing openness and protection? Shanghai Botanical Garden creates blue or green belts integrating with urban landscapes in part of garden boundaries, enhances science popularization facilities and infrastructure for the inner garden area, and redevelops biodiversity conservation habitats in the core area. The botanical garden and city coexist in an urban system where infrastructure and human activities are synergised with ecosystem services and other benefits provided by greenery and biodiversity. This poster will give some examples of sustainable transformation and development suitable for many of the old botanical gardens located in high-density urban areas worldwide.