

#adaptations

#management

#stormwater

TECHNICAL GUIDE TO ECO-FRIENDLY DESIGN: PLANTING AROUND URBAN TREE TRUNKS

Structure : Plants & City



The challenges of adapting to global changes and slowing the decline in biodiversity require a rethinking of the models used to design and manage urban green spaces. In cities, vegetation serves not only as a structuring or aesthetic element but also as a response to public health and ecosystem health needs. In dense urban environments, it is possible to work in small, targeted ways to enhance the functions provided by green spaces.

Tree bases—including the planted areas around the base and the gaps between rows of trees—offer potential for greening that remains largely untapped or under-documented. Many

cities are implementing programs designed to enhance the environmental, landscape, and social functions of these spaces. These initiatives sometimes draw on new models for the design and management of green spaces, promoting an ecological approach aimed at delivering a wide range of ecosystem services.

The purpose of this guide is to explore in depth the design methods for these developments and the ecological management of urban tree bases. It aims to better understand how these measures support biodiversity by increasing interactions between flora and fauna, as well as to highlight practices that promote more sustainable management with less impact on the environment and resource use.

Dagois R., Dépinoy M., Haouzi M., 2025. Greening Urban Tree Bases. Technical Guide to Ecological Design. Plante & Cité, 52 p

SUMMARY

1. UNDERSTANDING THE ISSUES

- Introduction
- Green tree bases in the city: the role of plantings and the ecological network
- Current practices for greening tree bases
- A typology of vegetated tree bases
- Soils: A Habitat for Plant Life and Growth
- Plant and Faunal Diversity at the Base of Trees
- Optimized water resource management around and within the site
- Integration of furniture and equipment to protect trees
- A place for gardening, learning, and training

2. IMPLEMENTING FUNCTIONAL VEGETATION

- Action Sheet 1: Improve and restore the functionality of existing soils
- Action Sheet 2: Improve stormwater management and promote the sustainability of plantings
- Action Sheet 3: Selecting suitable plants for tree bases
- Action Sheet 4: Develop and manage tree bases as habitats for local native flora and fauna
- Action Sheet 5: Encourage citizen participation in greening tree bases

About Plante & Cité:

Plante & Cité is a national research and experimentation

organization focused on green spaces, landscape, and nature in urban areas. This technical center facilitates the transfer of scientific knowledge to professionals in businesses and local governments.

We produce resources that address the top priorities of professionals: implementing ecological management, conserving water, selecting plants suited to urban conditions, preserving biodiversity, and understanding the benefits of plants for health and well-being...

Plante & Cité is a non-profit organization established in Angers in 2006, as part of the Végépolys Valley competitiveness cluster, to address a shared need for experimentation and the sharing of professional practices in the sustainable management of green spaces.

Sponsored by the Association of Mayors of France, it is recognized by the Ministries of Ecological Transition, Territorial Cohesion, and Agriculture. Plante & Cité manages the websites www.ecophyto-pro.fr and www.nature-en-ville.com.

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