

MD Green INFRA Method

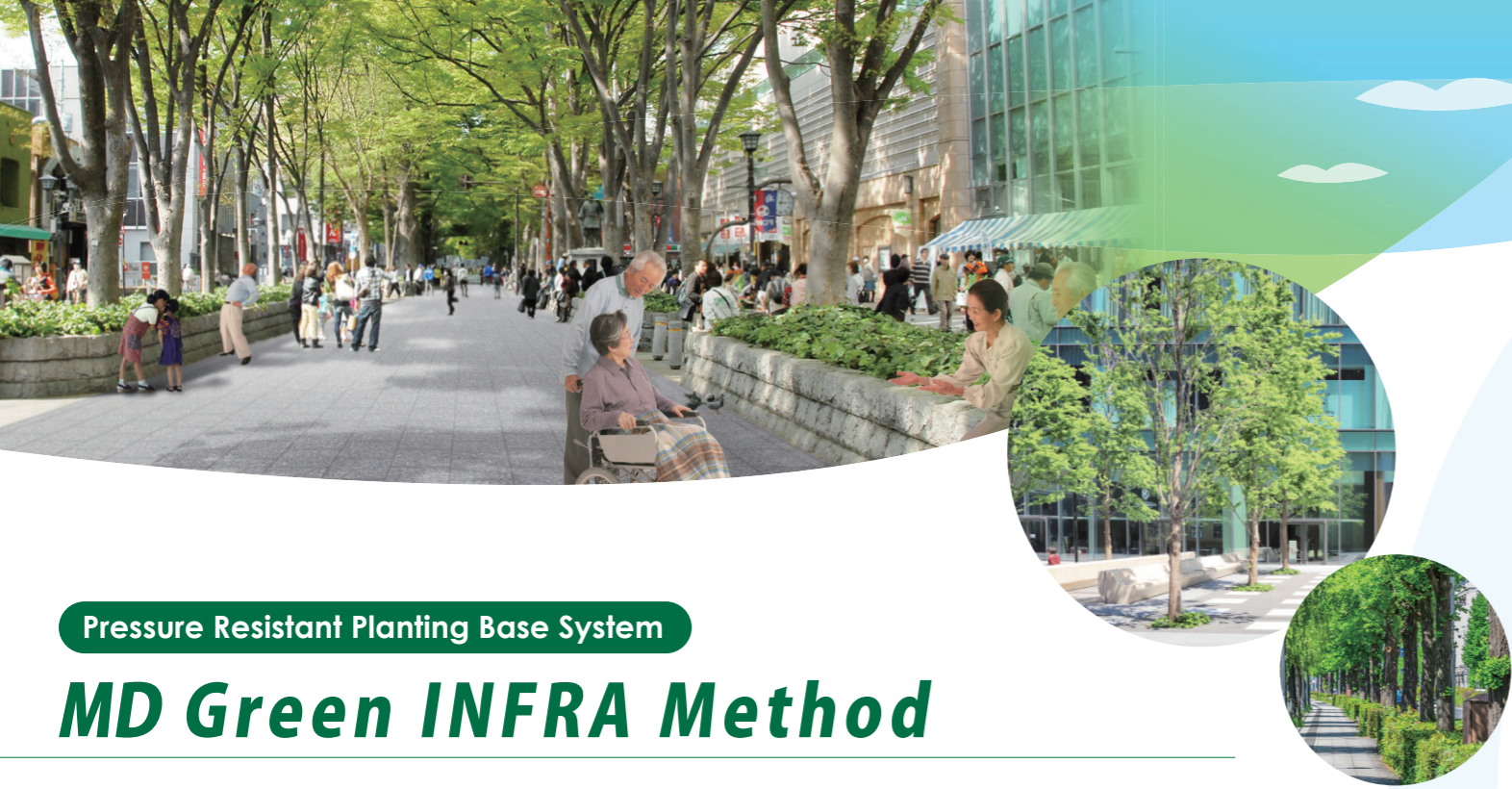


Pressure Resistant Planting Base System "MD Green INFRA Method" creates and preserves a growing environment for tree root system while ensuring pavement bearing strength. Incorporating Aquapla; resin-made storage structure, in the planting base for urban trees to help prevent the destruction of pavement structure due to root exposure. Aquapla is a MLIT partner material for experimental study to develop pioneering green technology in 2022. (MLIT: Ministry of Land, Infrastructure, Transport and Tourism)

Maeda Road Construction Co., Ltd

1-11-3, Osaki, Shinagawa-ku, Tokyo, 141-8665, JAPAN Phone: +81-3-5487-0011

■For Inquiries _____



Pressure Resistant Planting Base System

MD Green INFRA Method

Co-existence of Pavement and Greenery

AQUAPLA® is a resin-made storage structure that creates a quality soil space to guide the tree roots and provides healthy growing environment for urban trees.

Various benefits of urban trees include better living environment and resilient city toward natural disasters.

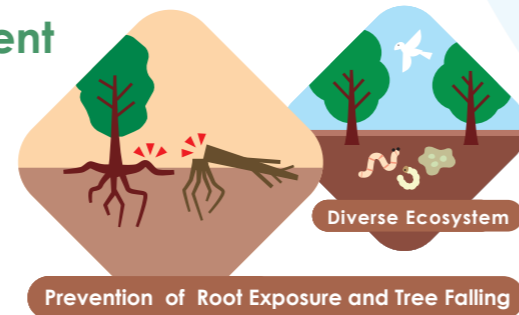
Improvement of Growing Environment for Street trees

Safe Road Environment

Prevents root exposure and tree falling by securing a healthy soil and air layer to guide the growing roots.

Diverse Ecosystem

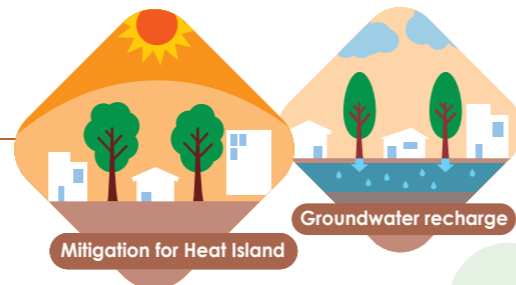
Achieves an environmental friendly to all living things without the use of solidifying materials



Reducing Urban Heat Island Effect · Recharging Groundwater

Mitigation for Heat Island

Tree shades and evapotranspiration helps in cooling excessive heat in cities



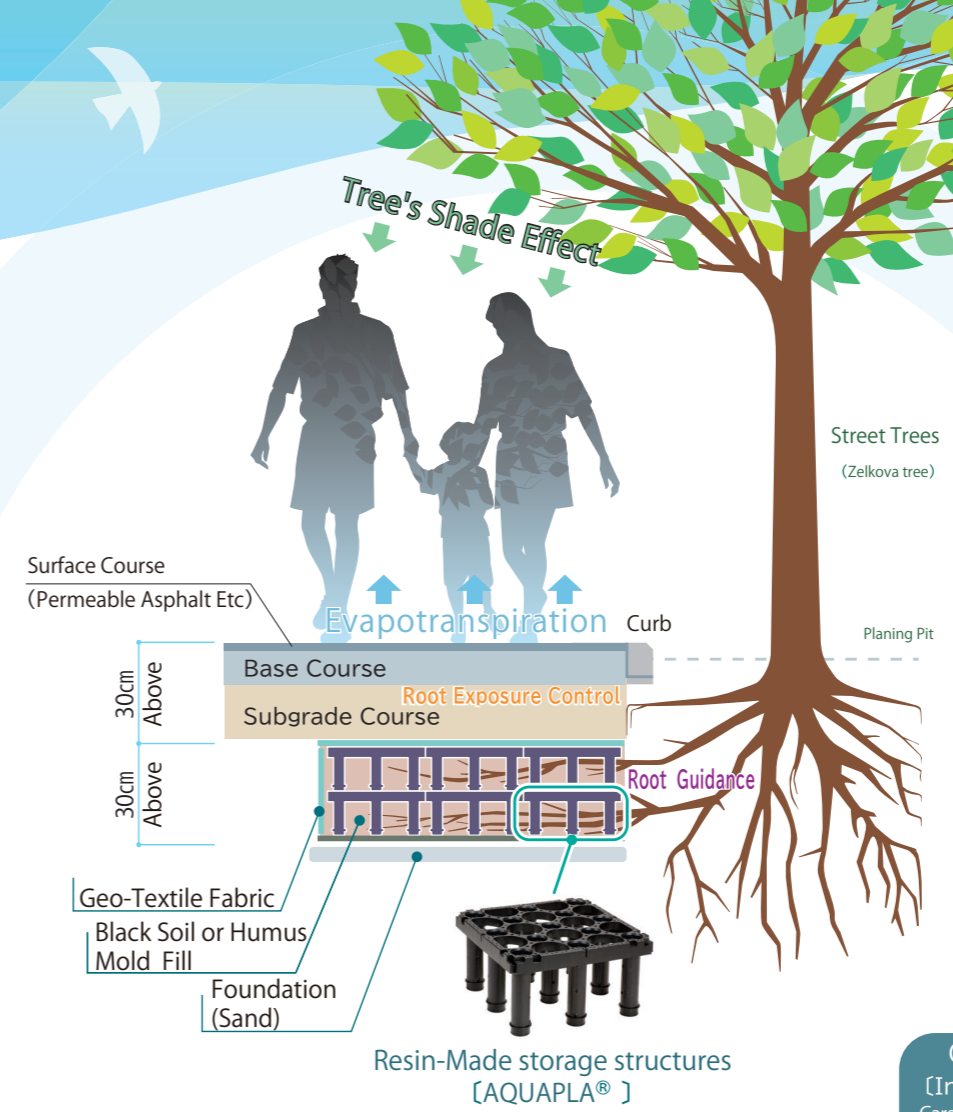
Rainwater and Fire Spreading Control

Sound Water Circulation

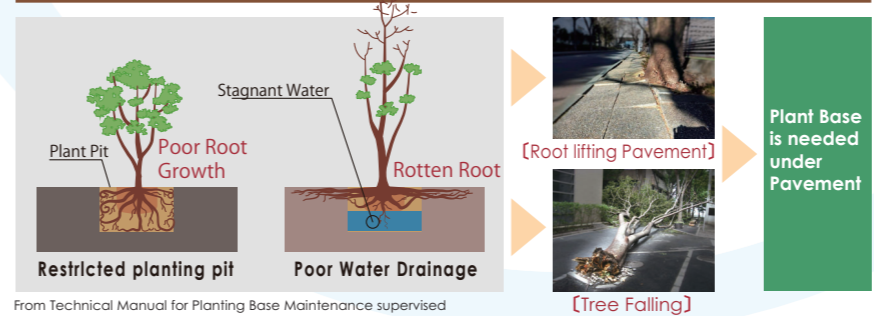
Reduces Rainwater Run-off by utilizing Substrate's(Soil) water retention and permeability

Control Fire Spreading

Controls fire spreading by growing healthy street trees and other urban trees



Problems Faced by Trees in Street Areas



From Technical Manual for Planting Base Maintenance supervised by Ministry of Land, Infrastructure, Transport and Tourism (Some parts were modified)

Benefits of Green INFRA Method

- Pressure Resistant**: Pressure-resistant plant base allows installation under pavement.

25Ton Truck etc	Live Load	58kN/m ²
	Embankment	13kN/m ²
	70cm Vertical Soil Pressure	71kN/m ²
	AquaPla® A9(Legged-Type)	148kN/m ² Vertical Compressive Strength
- Light**: Made of lightweight materials, therefore, it can be constructed manually in short period of construction.
- Freely**: Can be freely shaped so it can be installed anywhere.
- General**: Easy procurement and transportation of material



Construction Process (In case of Existing Tree)

Carefully excavate while protecting the roots then install.

- Excavation (Machine+Manpower)
- Lay Bottom Sheet
- Installation of AquaPla® (Root Guidance)
- Lay Sheets on the side
- Soil Filling (Black Soil+Leaf Mold)
- Compaction by Watering
- Lay Top Sheet
- Pavement Restoration



Construction Process (In case of New Tree)

Just simply bury aquapla with quality soil when you plant trees in urban setting.