

GreenBlue ®
URBAN

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**Kentucky Stormwater Association - 2017
Utilizing Urban Trees for Stormwater Management**

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PURPOSE

VISION

SOLUTIONS

CASE STUDIES

AGENDA

Innovative solutions for the urban landscape.

— Making grey cities green.





An aerial photograph of a city street. On the left, there are modern multi-story buildings with large glass windows. A row of young, green trees lines the sidewalk. In the background, a dense urban skyline is visible under a blue sky with scattered clouds. A dark, semi-transparent triangular shape is overlaid on the right side of the image, containing the main text.

Importance of Trees in Green Infrastructure - TREES = BMP

The Challenges of Green Infrastructure in the Urban Environment



DID YOU KNOW?

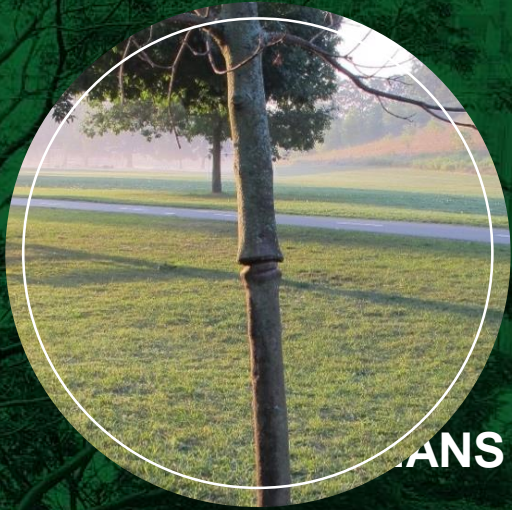
The average life span of a tree in an **urban environment** is only 3 to 8 years.

DID YOU KNOW?

50% of trees
planted in urban
areas do not
reach their 10th
birthday.

We
can
fix
that!

Are We Leading the way In Sustainable Infrastructure?



TRANS



BIKE

PETS



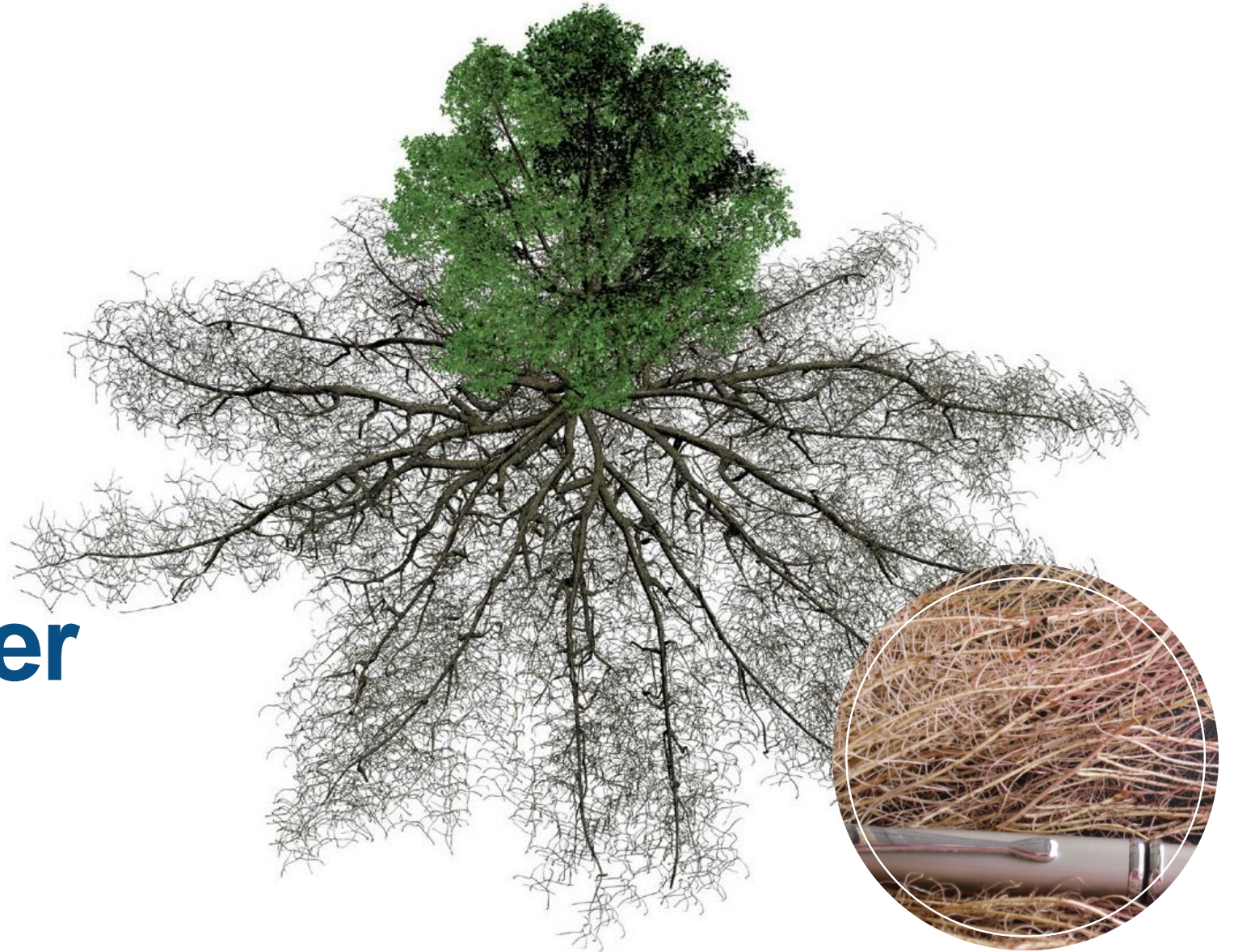
TRUNK



Healthy root systems

MAKE FOR

healthy Trees and Storm Water Benefits









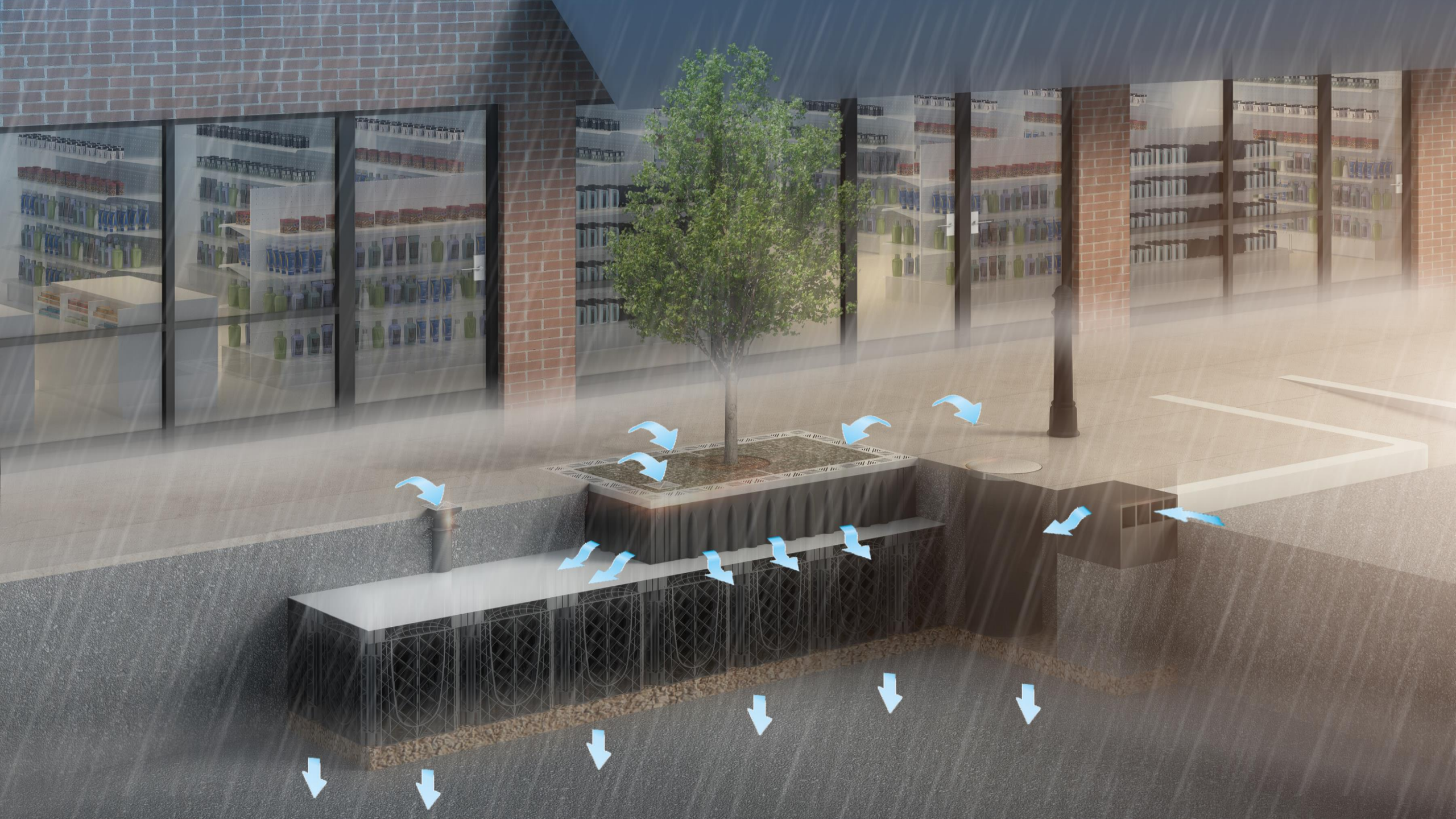


THE REQUIREMENTS FOR
complete systems
in sustainable
infrastructure

UNDERSTANDING WHY WE
NEED SYSTEMS LIKE

Soil Cells







SOIL CELLS





SOIL CELLS

RootSpace





Importance of Void Space and Structural Capacity

Engineered requirements of soil cells





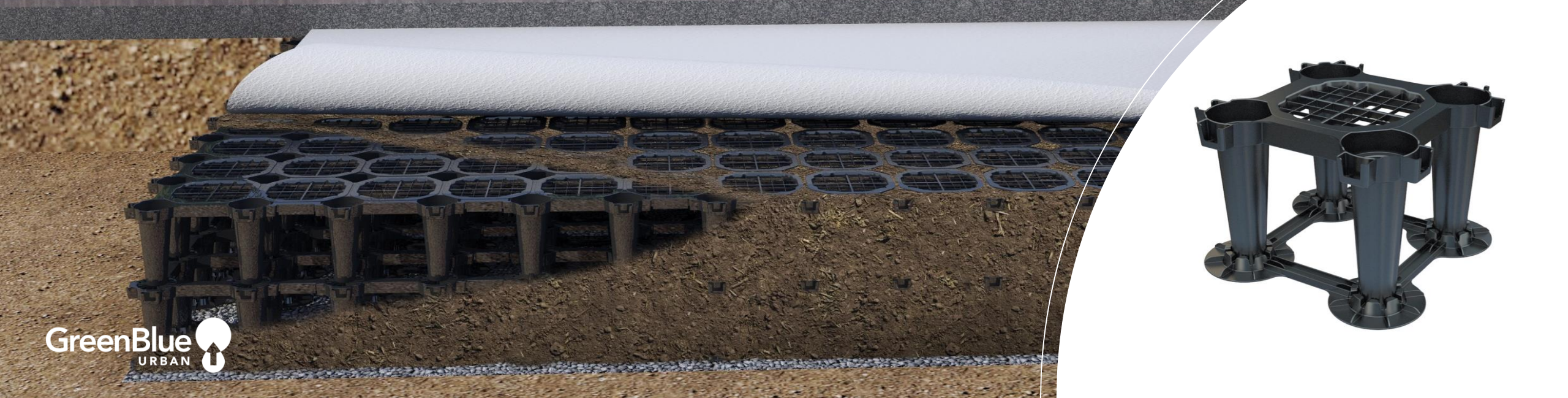
Stormwater Management Challenges





SOIL CELLS FOR STORMWATER WITH

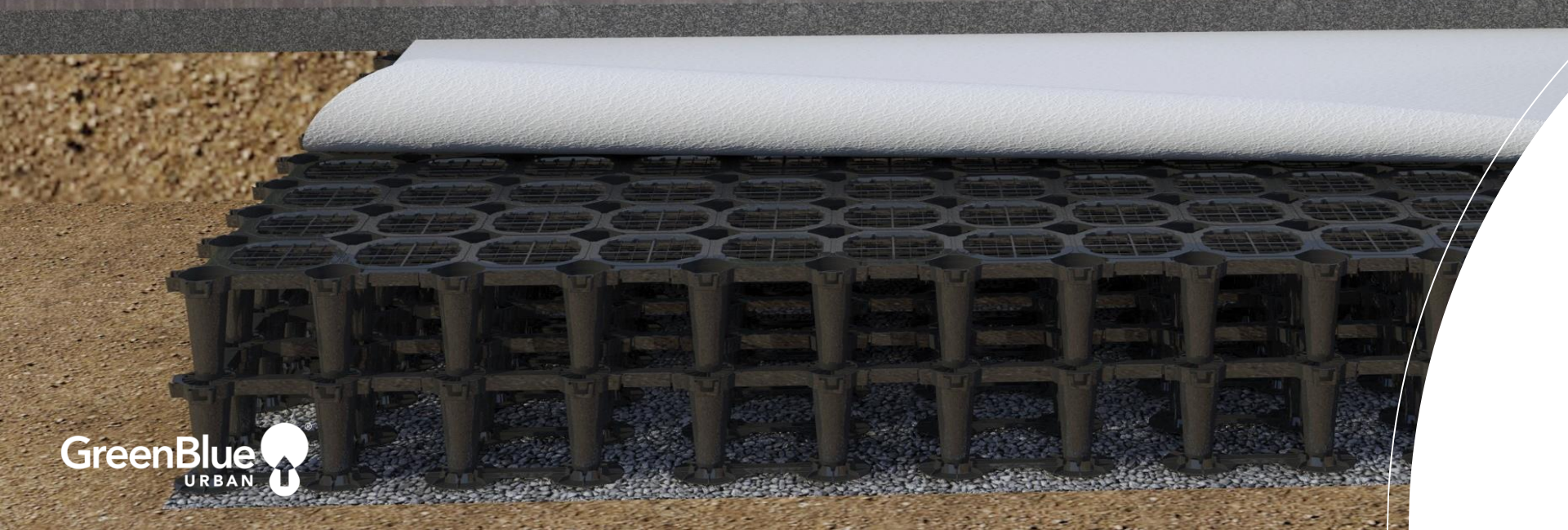
Pervious Surfaces





SOIL CELLS FOR STORMWATER WITH

Retention or Detention





SOIL CELLS FOR STORMWATER IN

Parking Lots



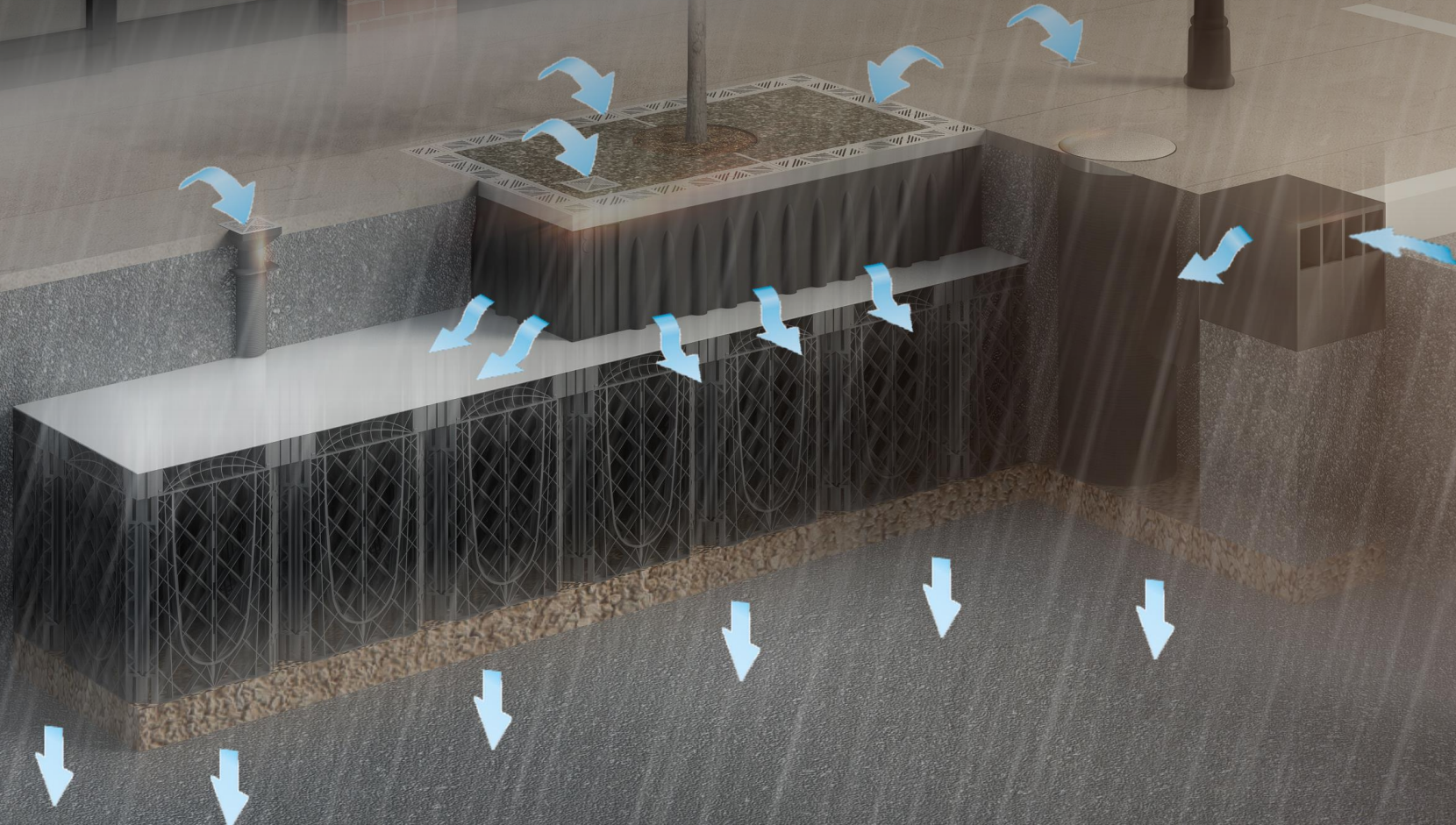
Stormwater Harvesting





STORMWATER MANAGEMENT

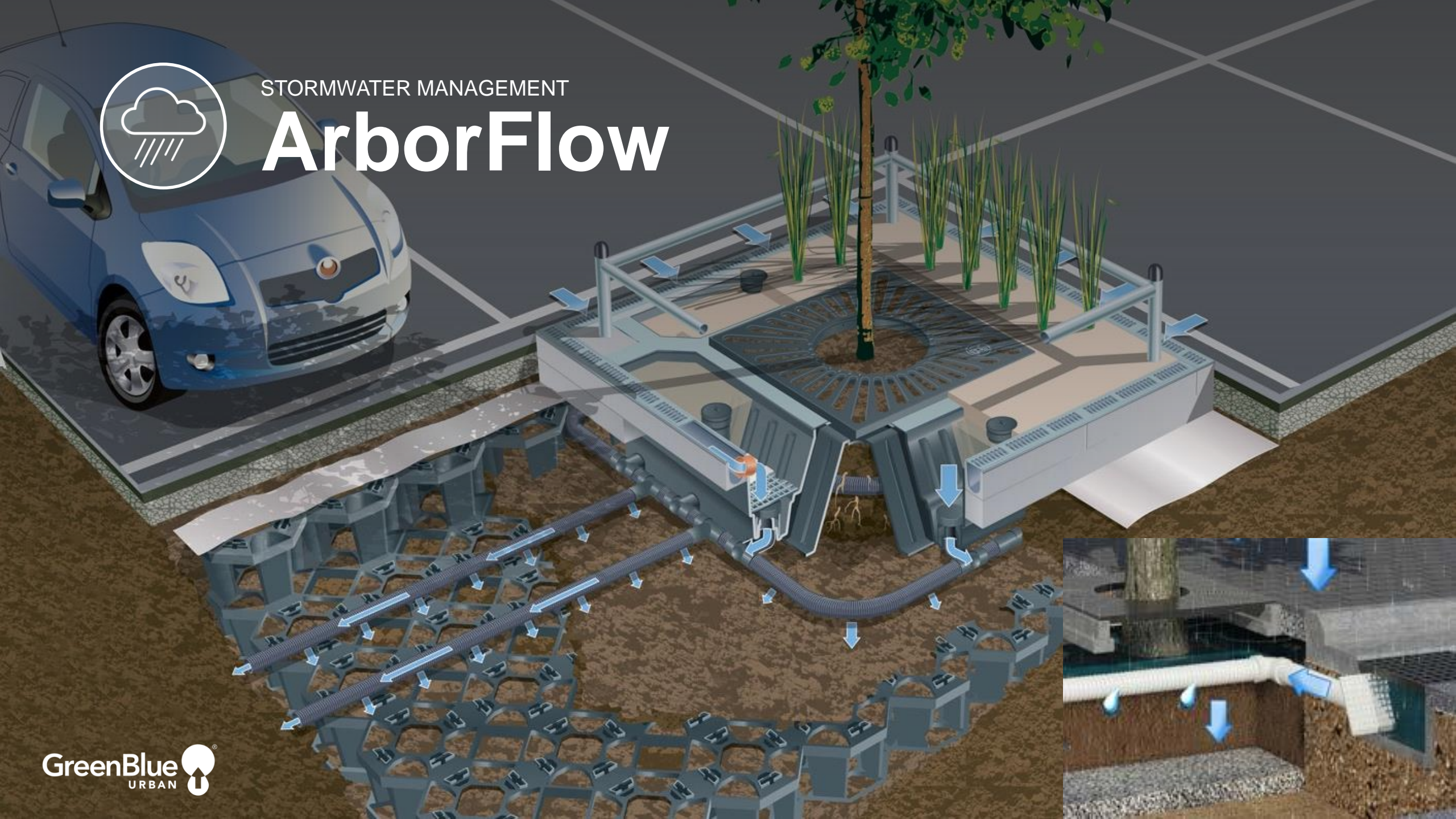
ArborFlow





STORMWATER MANAGEMENT

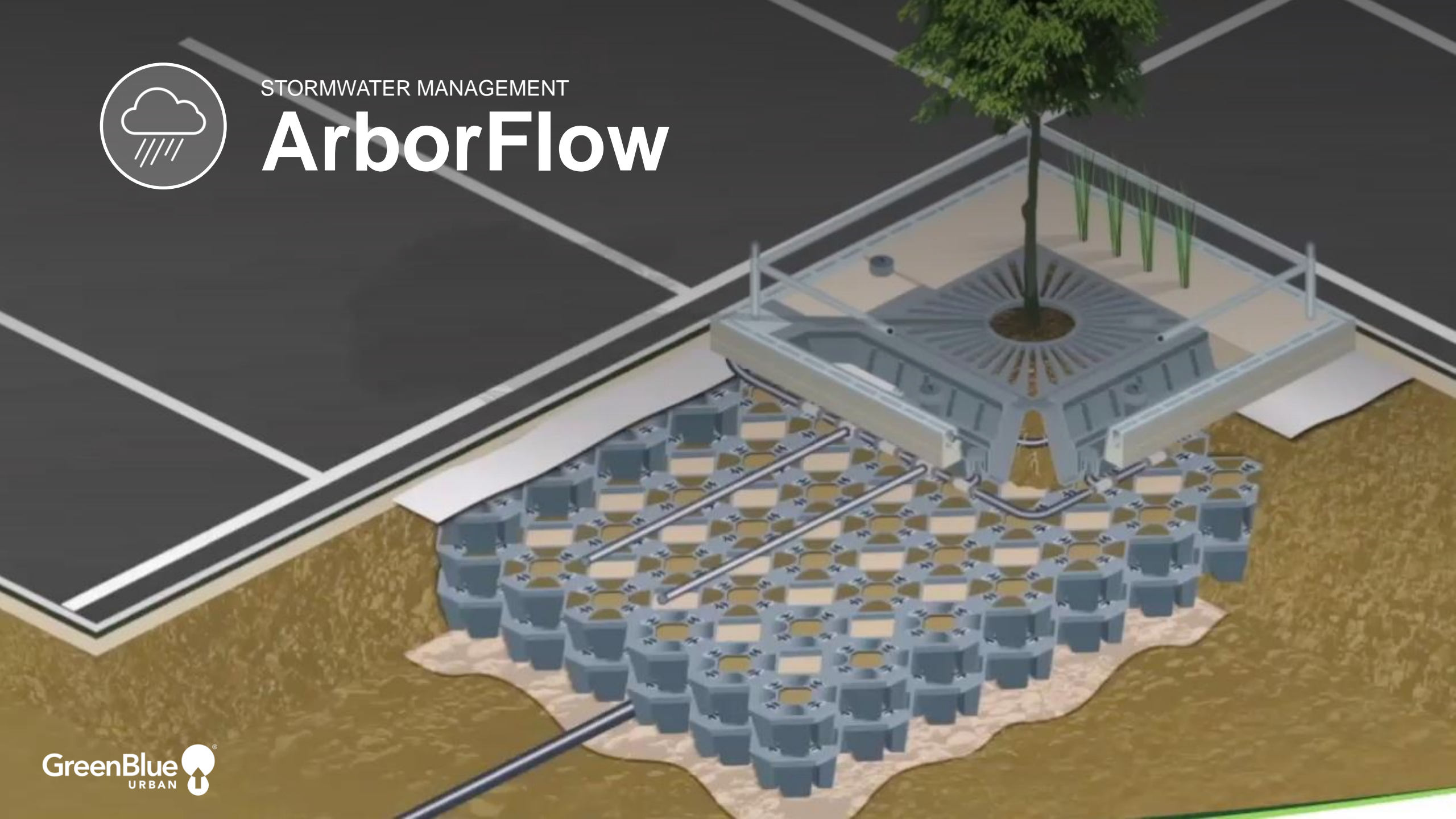
ArborFlow





STORMWATER MANAGEMENT

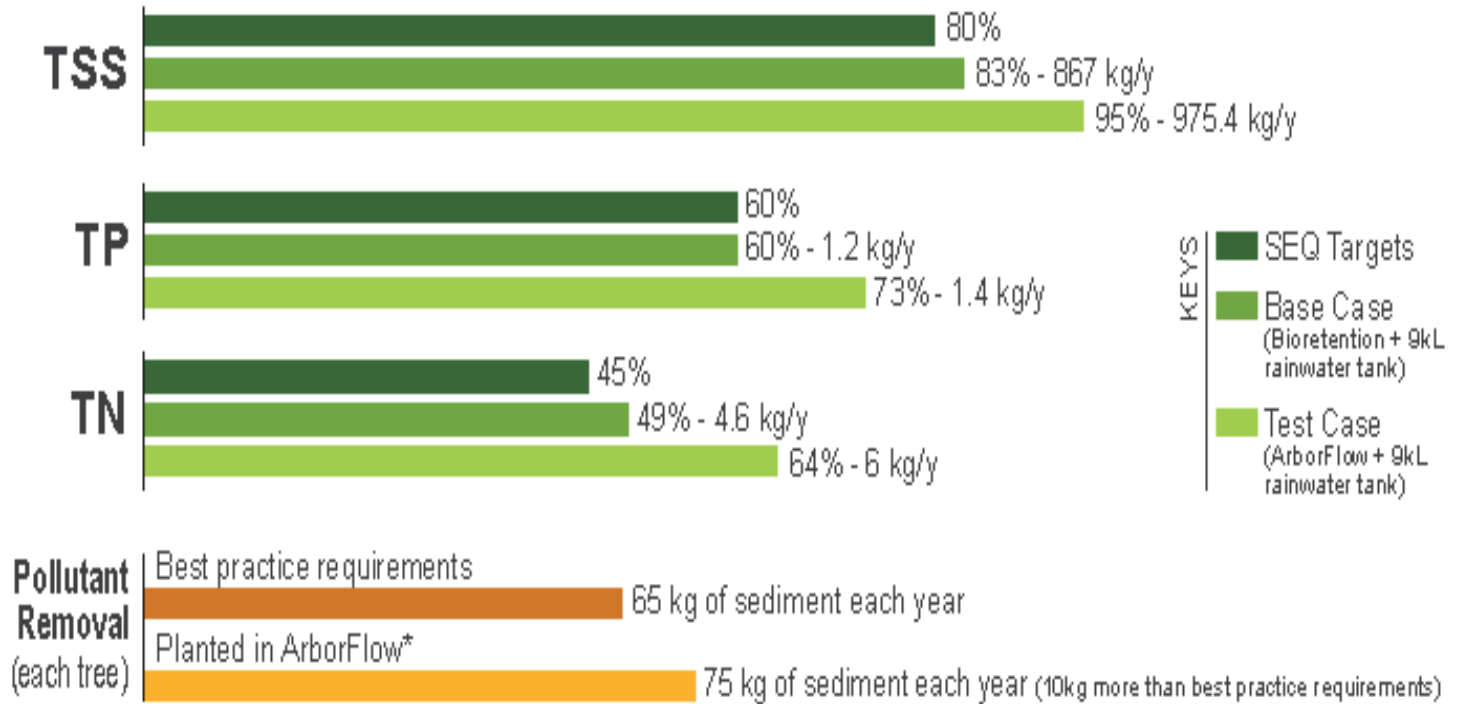
ArborFlow



STORMWATER MANAGEMENT

DEVELOPMENT TYPE: Small scale commercial with carpark

SITE AREA: 0.42 ha - 98% Impervious





STORMWATER MANAGEMENT

case study,
EVERY TREE
planted in ArborFlow* could:

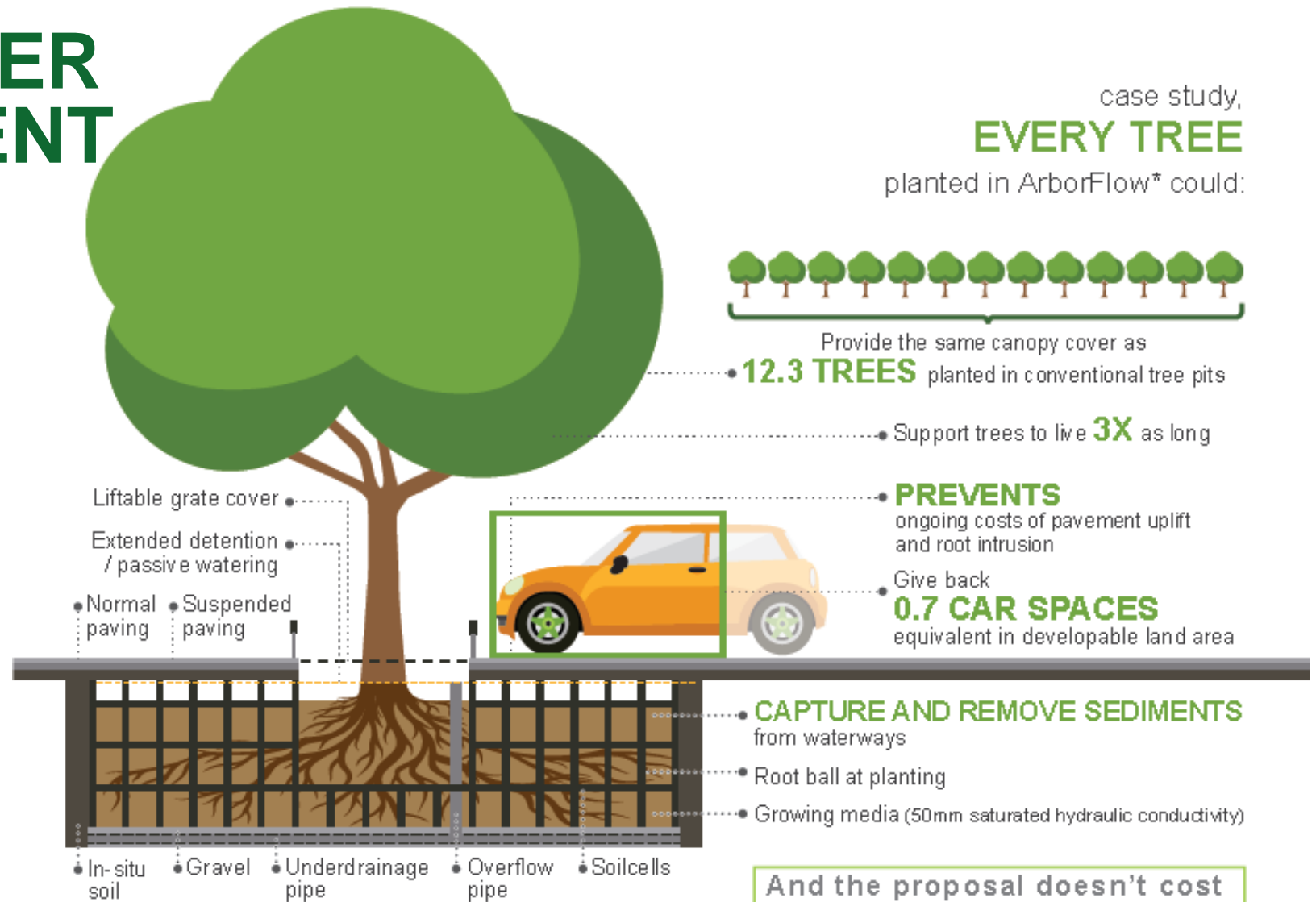


Provide the same canopy cover as
• **12.3 TREES** planted in conventional tree pits

• Support trees to live **3X** as long

• **PREVENTS**
ongoing costs of pavement uplift
and root intrusion

• Give back
0.7 CAR SPACES
equivalent in developable land area



• **CAPTURE AND REMOVE SEDIMENTS**
from waterways

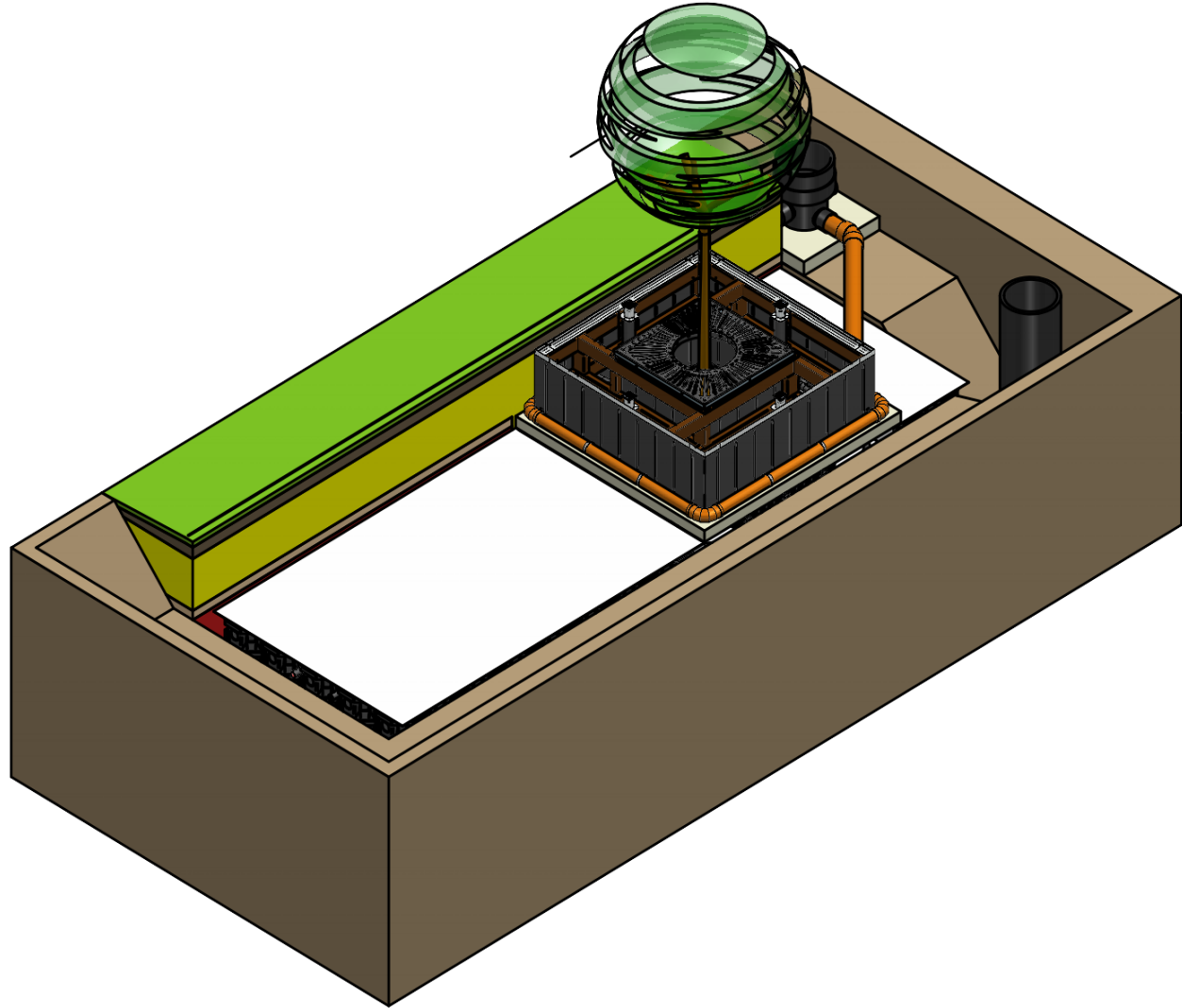
• Root ball at planting

• Growing media (50mm saturated hydraulic conductivity)

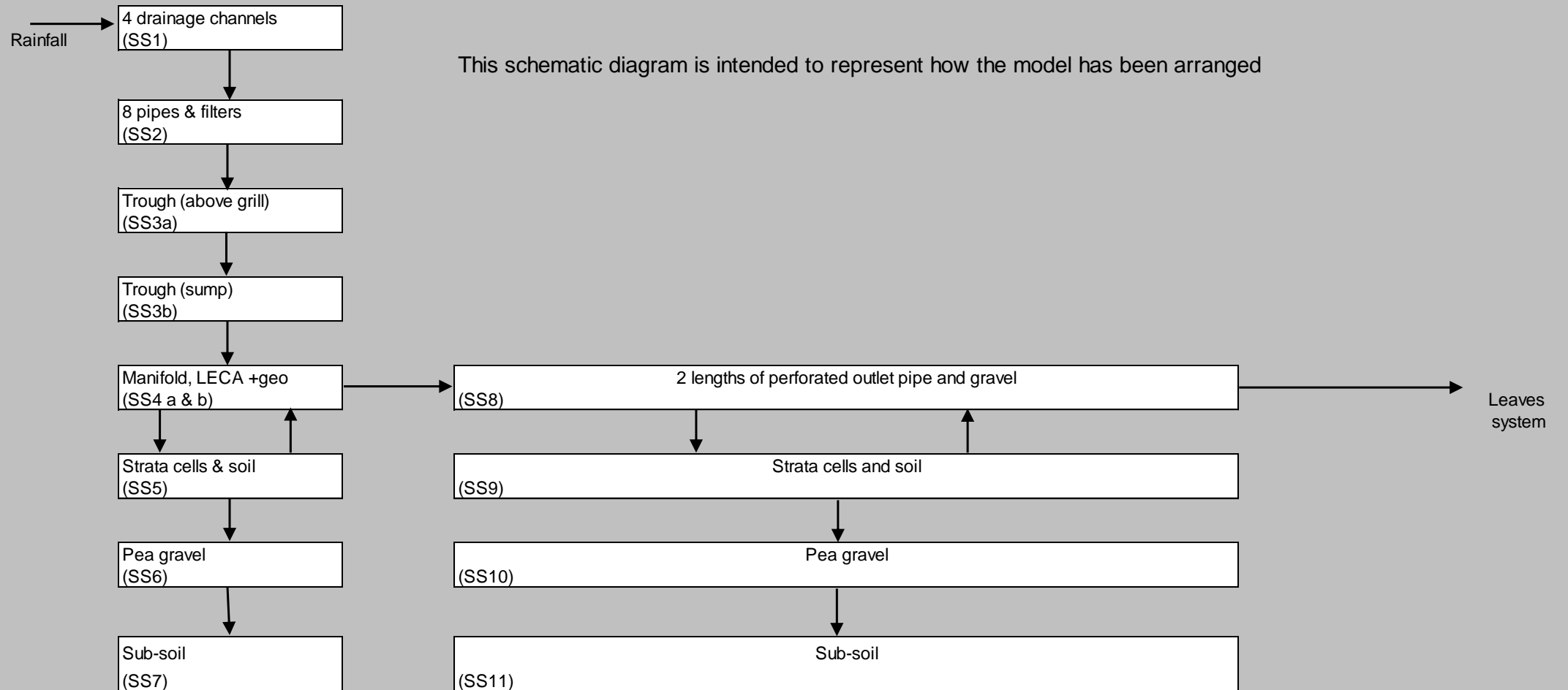
• In-situ soil • Gravel • Underdrainage pipe • Overflow pipe • Soilcells

**sized for both tree health and stormwater management*

**And the proposal doesn't cost
a cent more.**



Model schematic of the GR1019 system



ArborFlow Installation Dundee June 2012



ArborFlow Installation Dundee June 2012



ArborFlow Installation Dundee June 2012

