GreenBlue URBAN

Establishing the future urban landscape

Target soil volume CALCULATOR

WHY IS UNCOMPACTED SOIL SO IMPORTANT?

It's simple and logical - the nearer we can get to creating a woodland soil profile, just as nature intended, in urban areas, the longer the trees will live, the healthier they will be and the greater the benefits realised.

Probably the most critical factor in tree health and longevity is the provision of enough quality soil for the tree roots. When planning trees into urban projects, it is crucial that the target soil volume is established in the early design stages. This will maximise return on your green investments and ensure they grow quickly into large healthy specimens.

Roots thrive in a forest situation because they have access to quality uncompacted soil volumes with good nutrient levels, adequate moisture holding capacity – and all importantly the existence of both micro and macro pore space, for both water and air transport.

In a compacted soil situation, the macro pores are removed in the compaction process. This seriously limits both water movement within the soil and the tree's ability to extract the needed nutrients from the soil.

RootSpace® offers the perfect solution.

This market leading soil structure system provides high uncompacted soil volumes with advanced engineering specifications to support greater vertical loads.

Find this resource at www.greenblue.com/resources/soil-calculator

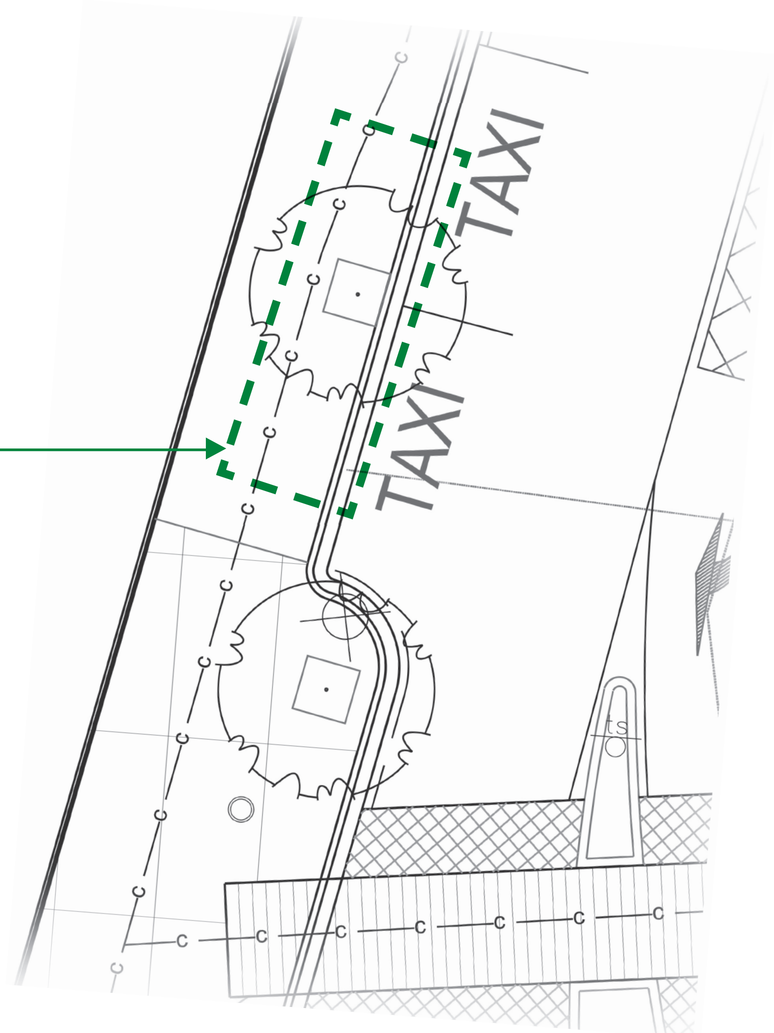
GreenBlue® URBAN
Establishing the future urban landscape

Scenario 1

SMALL TREE PITS

Mature canopy diameter: 3m

Tree pit measurements
5m long x 2m wide



Calc 1	Projected Mature Canopy Diameter (metres)	= 3 (Diameter)
Calc 2	Projected Mature Canopy Area (square metres), (n x Radius^2)	= 7.1 (Area)
Calc 3	Target Soil Volume (cubic metres), (Area x 0.6m)	= 4.24 (Volume)

Minimum target soil volume for my small tree **= 4.24m^3**

Utilising RootSpace® structural soil modules installed to a depth of 600mm and based on the adjacent plan, we can achieve the minimum uncompacted rooting volume required.

NOTES

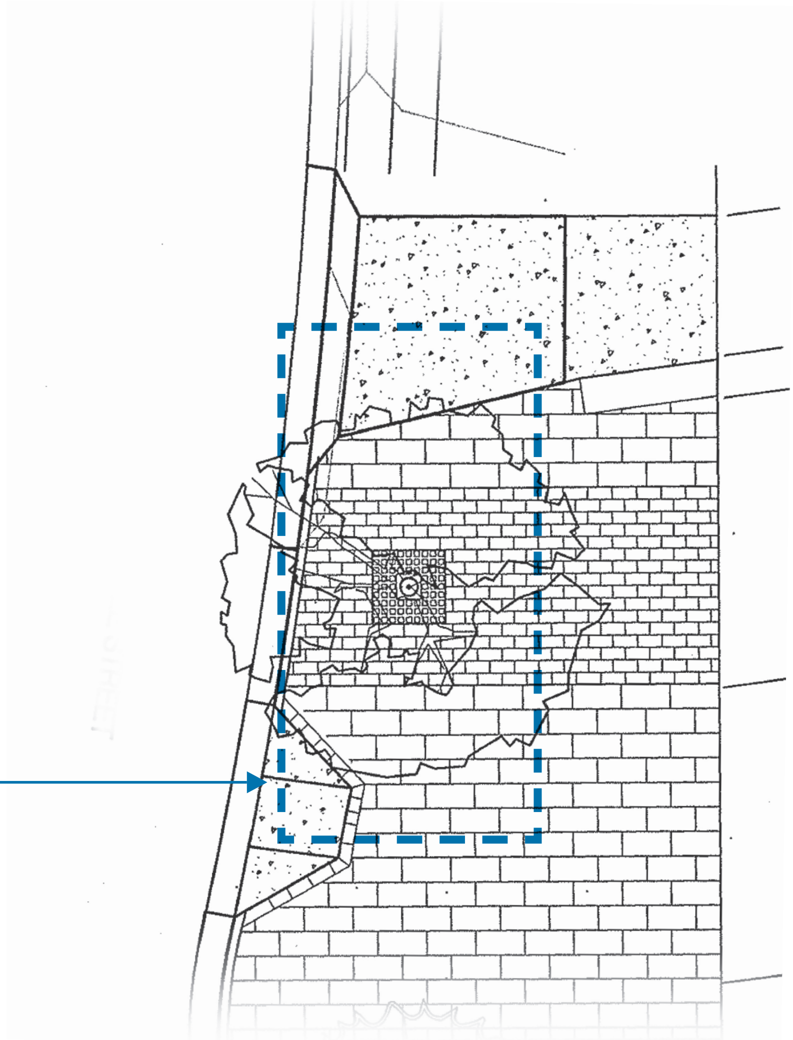
GreenBlue® URBAN
Establishing the future urban landscape

Scenario 2

MEDIUM TREE PITS

Mature canopy diameter: 5m

Tree pit measurements
6m long x 3m wide



Calc 1	Projected Mature Canopy Diameter (metres)	= 5 (Diameter)
Calc 2	Projected Mature Canopy Area (square metres), (n x Radius^2)	= 19.6 (Area)
Calc 3	Target Soil Volume (cubic metres), (Area x 0.6m)	= 11.8 (Volume)
	Minimum target soil volume for my medium tree	**= 11.8m^3**

Utilising RootSpace® structural soil modules installed to a depth of 600mm and based on the adjacent plan, we can achieve the minimum 12m^3 of uncompacted rooting volume required.

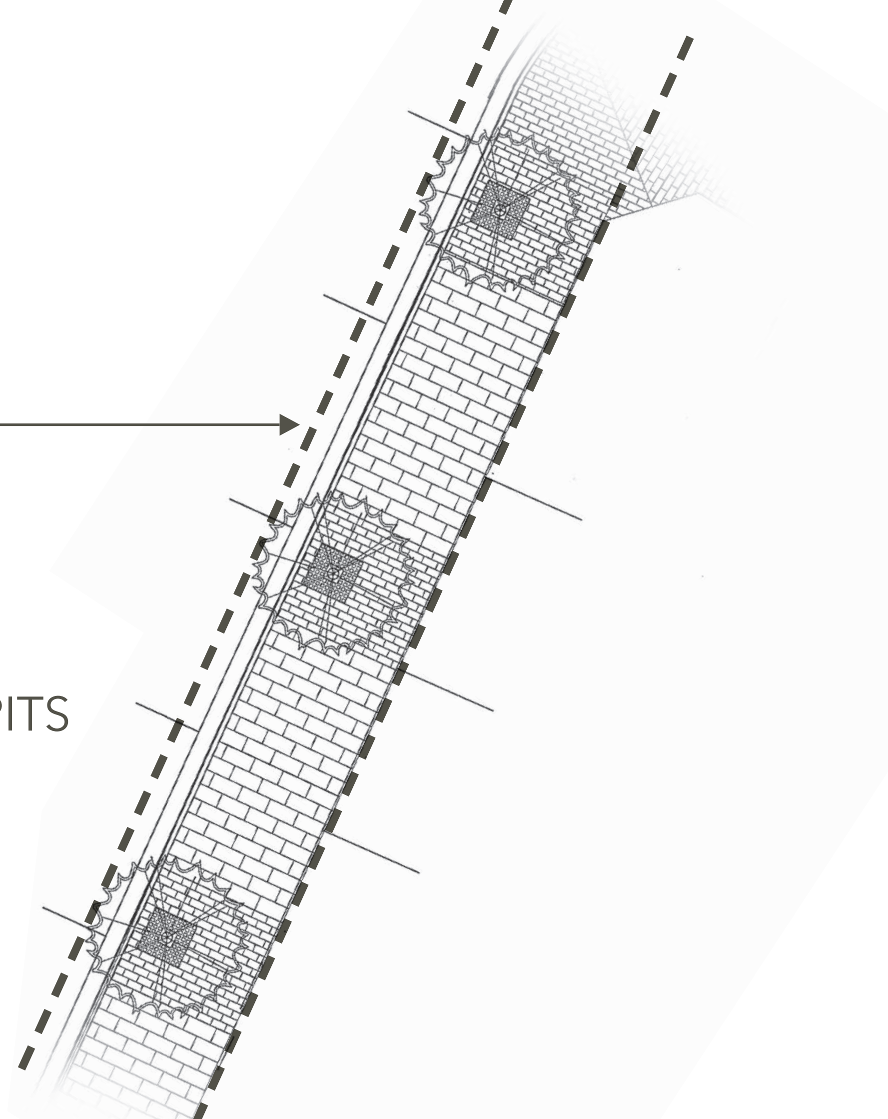
NOTES

GreenBlue® URBAN

Establishing the future urban landscape

Tree pit trench - 2.5m wide

Tree spacing - 8m



Scenario 3

MEDIUM LINKED TREE PITS

Mature canopy diameter: 5m

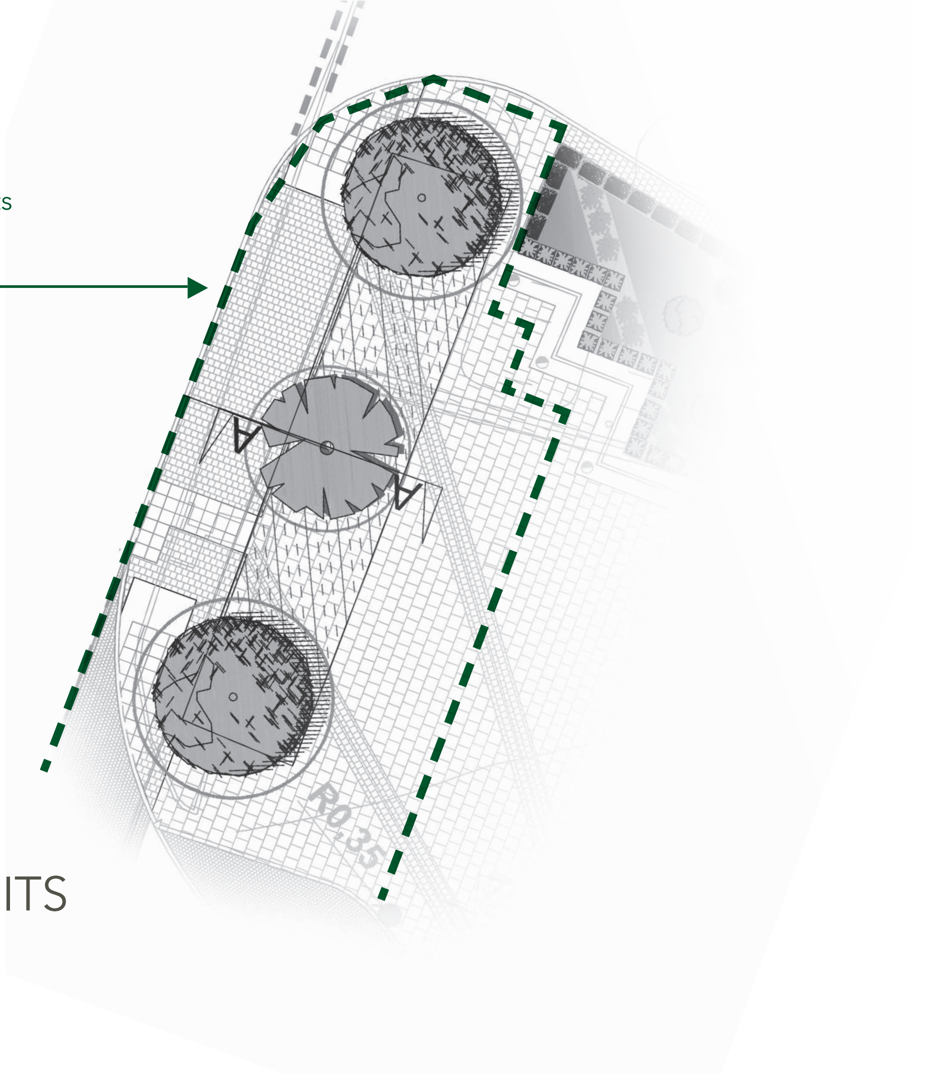
Calc 1	Projected Mature Canopy Diameter (metres)	= 5 (Diameter)
Calc 2	Projected Mature Canopy Area (square metres), (n x Radius^2)	= 19.6 (Area)
Calc 3	Target Soil Volume (cubic metres), (Area x 0.6m)	= 11.8 (Volume)
Calc 4	Less 20% for linked tree pits	= 9.44m^3
	Minimum target soil volume for my medium tree	**= 9.44m^3**

Utilising RootSpace® structural soil modules installed to a depth of 600mm and based on the adjacent plan dimensions, we can achieve in excess of 10 cubic metres of uncompacted rooting volume. When tree pits are linked, target soil volumes can be reduced by up to 20% as the roots will ultimately share each other's soil volume.

NOTES

GreenBlue URBAN®
Establishing the future urban landscape

Tree pit measurements
8m long x 3m wide



Scenario 4

LARGE LINKED TREE PITS

Mature canopy diameter: 8m

Calc 1	Projected Mature Canopy Diameter (metres)	= 8 (Diameter)
Calc 2	Projected Mature Canopy Area (square metres), (n x Radius^2)	= 50 (Area)
Calc 3	Target Soil Volume (cubic metres), (Area x 0.6m)	= 30 (Volume)
Calc 4	Less 20% for linked tree pits	= 24 m^3
	Minimum target soil volume for my large tree	**= 24 m^3**

Utilising RootSpace® structural soil modules installed to a depth of 1.2m, stacked 2 modules high and based on the adjacent plan dimensions, we can achieve in excess of 27 cubic metres of uncompacted soil volume. When trees are linked together, target soil volumes can be reduced by up to 20% as the roots will ultimately share each other's soil volume.

NOTES

UNITED KINGDOM

Compass Park | Bodiam | TN32 5BS

+44 (0)1580 830 800

enquiries@greenblueurban.com

NORTH AMERICA

Woodstock, ON N4T1P1

+1 866 282 2743

inquiries@greenblue.com

greenblue.com