ArborRaft System
Urban Tree Planting

Nottingham Trent University city site is located in the heart of Nottingham city centre with 30 buildings surrounded by 5.1 hectares of open space. The heart of the campus underwent a multi-million pound refurbishment to keep up with current demands and needs.

The redevelopment consisted of two state-of-the-art buildings with beautiful landscaped outdoor spaces. The Arbortech Complex is the centerpiece of campus that will be free from smoking, unauthorised traffic and parked bicycles, which creates an artificial forest floor that sits within the tree pit, providing a sustainable, ecologically-friendly environment to establish and encourage the healthy growth of the trees.

Taking into account the size of the trees and the environment – the whole site was an obvious choice for the Arbortech System. This is a system that combines nutrient-rich soil compaction. As the system matures the roots are allowed to grow naturally and the essential oxygen, nutrients and water can flow freely within the growing media which allows the steel growing environment to establish and flourish.

The landscaping works for this area included the planting of 50 mature trees. Larger, more established trees and the environment – the whole site was an obvious choice for the Arbortech System. This is a system that combines nutrient-rich soil compaction. As the system matures the roots are allowed to grow naturally and the essential oxygen, nutrients and water can flow freely within the growing media which allows the steel growing environment to establish and flourish.

Ulyett Landscapes turned to gt Specifer for the specification of the landscape components. The Arbortech System was again when their adjoining car park was revamped a few months later.

As well as the Arbortech System the team provided one of the UK’s most environmentally-friendly universities and we are thrilled to be helping them to create a sustainable, ecologically-friendly campus. The provision of green grass and open spaces were pivotal to the University’s redevelopment plans – they wanted to provide places to unwind and relax. The Arbortech System was again when their adjoining car park was revamped a few months later.

We were delighted when they were so impressed that they chose the Arbortech System again when their adjoining car park was revamped a few months later.

Contact the team: info@gtspecifier.co.uk

gt Specifer

ArborRaft System

Case study – Nottingham Trent University redevelopment

Urban green spaces play a vital role in the environmental, social and economic future of our towns and cities.

gt Specifer recognises that the creation of urban forests and the greening of urban areas is a major driving force in modern urban development, creating opportunities for landscape architects across the UK.

The reconfiguration of the hard landscape requires a balance of green and environmental pressures – storm water and sustainable drainage, including micro-climates, improving an quality and CO2 levels.

gt Specifer has worked with landscape architects, civil engineers and local government to develop a portfolio of landscape solutions that consider all of the environmental pressure points above.

The Arbortech System is supplied to gt Specifer by Infra Green Limited. Infra Green specialises in tree planting solutions, landscaping and water management systems. Offering a comprehensive portfolio of products and solutions that give urban trees the best start in life. The Arbortech System creates an artificial forest floor that prevents soil compaction and protects the hard landscape. It creates an air void that diverts root growth away from the surface. The Arbortech System works with the tree’s roots to guarantee work with the tree’s roots to guarantee urban areas subject to vehicle or pedestrian trafficking. The individual Arbortech units lock together and form a raft system that sits within the tree pit providing a sustainable, ecologically-friendly environment to establish and encourage the healthy growth of the trees.

We were delighted when they were so impressed that they chose the Arbortech System again when their adjoining car park was revamped a few months later.

As well as the Arbortech System the team provided one of the UK’s most environmentally-friendly universities and we are thrilled to be helping them to create a sustainable, ecologically-friendly campus. The provision of green grass and open spaces were pivotal to the University’s redevelopment plans – they wanted to provide places to unwind and relax. The Arbortech System was again when their adjoining car park was revamped a few months later.

We were delighted when they were so impressed that they chose the Arbortech System again when their adjoining car park was revamped a few months later.

Contact the team: info@gtspecifier.co.uk
The ArborRaft System combines nutrient rich ArborRaft Soil with exceptionally strong geocellular units. Together they create a healthy growing space for trees in areas subject to vehicle loadings and trafficking.

Individual ArborRaft units are locked together to form a raft system that sits across the tree pit, providing load bearing support and reducing soil compaction.

The ArborRaft System works by spreading the load of any vehicle movements around the tree's rooting area. This eliminates soil compaction of the growing media within the pit and reduces the risk of vehicles damaging the pavement surrounding the trees to establish and mature.

The ArborRaft System accommodates vehicle loadings from cars through to heavy goods vehicles. The open structure of the unit acts as an air gap diverting root growth away from the pavement towards nutrient-rich soil. It is a tried and tested system that has successfully been installed into projects across the UK and Europe.

How it works?

Open Structure

The open structure of the ArborRaft Soil is retained, allowing roots to grow naturally and extract oxygen, nutrients and water to flow freely through the growing media. The nature of this system assists drainage and the free flow of water through the tree pit. The system is flexible and can be designed to fit any tree pit size ensuring larger tree pits with less plastic.

Structural Strength

The structural strength of the ArborRaft System reduces the impact of loads placed upon it to protect the growing media and tree roots below.

Prevents Compaction

The system prevents root compaction, damage to the root structure and does not restrict the natural growth path of the tree’s roots. This enables the tree to create its own root anchoring system that reflects the growth and spread of its canopy.

How it works?

1. Excavate tree pit to include 500mm supporting shelf at the top of the tree pit.
2. Backfill lower pit with approved subsoil, position tree or leave vacant for planting season.
3. Install ge anchoring system and compact subsoil to architects specification.
4. Add ArborRaft soil to top approx. 400mm of tree pit.
5. Install irrigation system.
6. Add ArborRaft TRC30 Membrane.
7. ArborRaft units simply lock together with connectors.
8. Backfill with ArborRaft Soil.
9. Cover with Arborflex 300 Membrane and finish to hard landscaping specification.
10. Finish as per specification.

Standard installation levels:

Assuming an 80mm thick paving block is used, the complete installation height from pavement surface level to the underside of the ArborRaft layer will be:

- Paving layer: 80 mm
- Paving bedding layer: 50 mm
- ArborRaft layer: 150 mm
- Sand bedding layer: 25 mm
- Total: 305 mm

*Above represents a typical car park installation where the system is subject to car trafficking.
The tried and tested ArborRaft soil has been specially developed for the UK market to work as a rootzone with the ArborRaft system. This ensures the structure of the growing media remains open and the correct level of water, air and nutrients are transported through the soil to the tree’s roots.

The design of the system works in partnership with the ArborRaft soil prevents compaction within the tree pit, protecting and enhancing the tree’s root growth.

Extensive testing has been completed for the ArborRaft Soil, ensuring that the optimum moisture, aeration and nutrient content is achieved, whilst maintaining a stable soil layer.

The ArborRaft soil is manufactured in partnership with the ArborRaft system provides the ideal start in life for an urban tree. The growing media is specially developed for the UK market to work as a rootzone with the ArborRaft system. This ensures the structure of the growing media remains open and the correct level of water, air and nutrients are transported through the soil to the tree’s roots. Together with soil aeration, providing adequate moisture and oxygen to the structure to allow the free-flow of water and nutrients.

The importance of soil quality and quantity within tree pits has been further highlighted in the TDAG Trees in Hard Landscapes report, September 2014 stating that:

- The growing media should provide the ideal start in life for an urban tree. The growing media is specially developed for the UK market to work as a rootzone with the ArborRaft system. This ensures the structure of the growing media remains open and the correct level of water, air and nutrients are transported through the soil to the tree’s roots.
- Together with soil aeration, providing adequate moisture and oxygen to the structure to allow the free-flow of water and nutrients.
- The importance of soil quality and quantity within tree pits has been further highlighted in the TDAG Trees in Hard Landscapes report, September 2014 stating that:
- The growing media should provide the ideal start in life for an urban tree. The growing media is specially developed for the UK market to work as a rootzone with the ArborRaft system.
- Together with soil aeration, providing adequate moisture and oxygen to the structure to allow the free-flow of water and nutrients.
ArborRaft System

gtSpecifier and Infra Green provide a wealth of experience and practical solutions for urban landscape projects. Working in partnership, we offer project specific design, technical and product advice to ensure the most cost effective and practical solution is achieved, for urban tree planting, green roofs, SUDS, ground stabilisation and landscaping applications.

T: 01423 332 114
E: info@gtspecifier.co.uk
W: gtspecifier.co.uk