



Cameo  Partners  
design studio

SANDFORD ROAD, DUBLIN 6  
**STANDALONE TREE REPORT**

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REV		DATE	ISSUED BY
P1	Issued for Planning Application	13.08.2021	GB

This Report includes input received CMK Horticulture & Arboriculture.

This document needs to be read in conjunction with the followings:

- CMK Arboricultural Assessment Arboricultural Impact and Tree Protection Strategy Report
- TSAN001 Tree Survey 101-103
- TSAN001 Arb Impact 104-106
- TSAN001 Tree Protection 107-109



## EXISTING TREE

The tree survey, produced by CMK Horticulture & Arboriculture, explains in detail the trees included in the existing site and the current condition of the trees.

The species mix over the site is quite diverse with plantings and self-seeded specimens distributed over the site. The main concentration of trees is located to the east of the site bordering Milltown Road. The trees in this area are a mixture of native, naturalised and exotic species. There has been limited management of the trees in this area to date with the result that there is strong competition between trees.

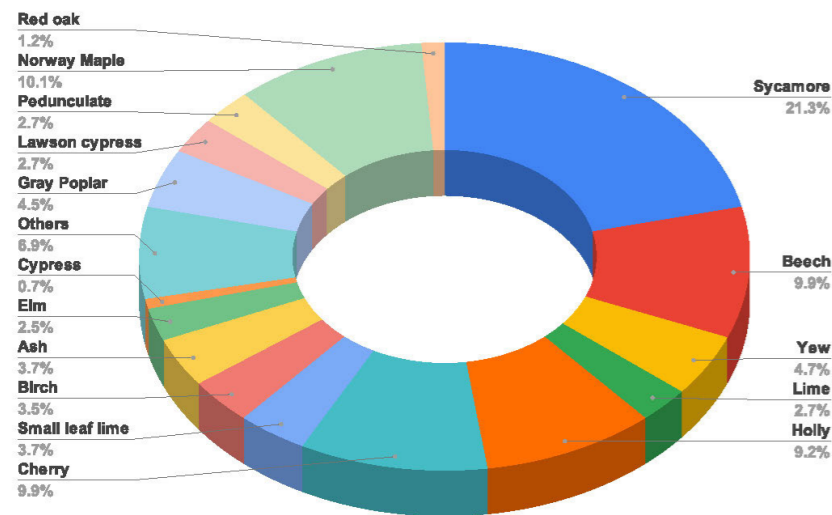
Our aim is to retain as many trees as possible without losing the site's natural biodiversity and character.

A total of 404 trees were identified and assessed.

## TREE CATEGORY BREAKDOWN

Category	Number	% of total
A	23	5.6%
B	206	51.1%
C	150	37.1%
U	25	6.2%

## TREE SPECIES BREAKDOWN

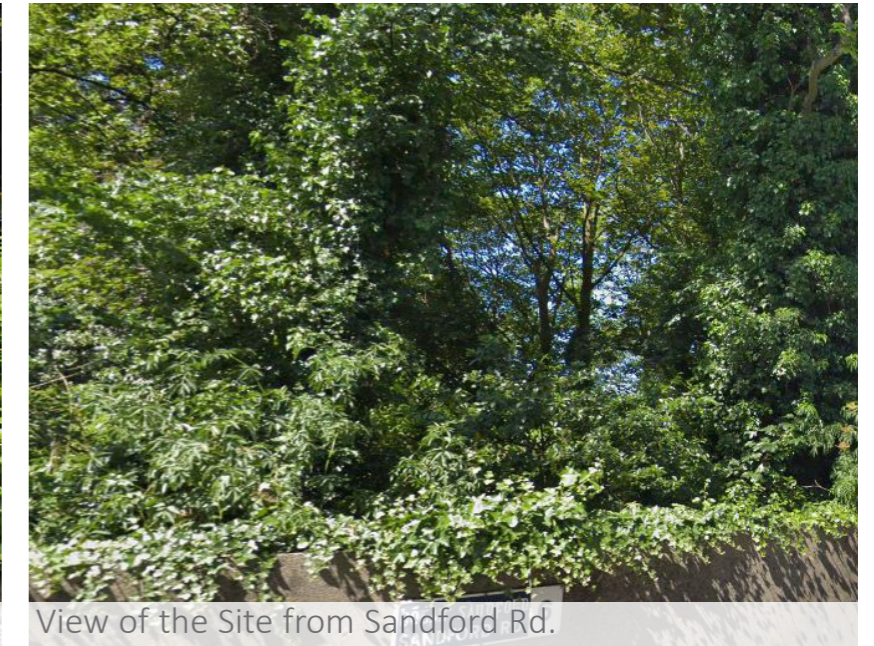


\*Please refer to Arboricultural Assessment Arboricultural Impact and Tree Protection Strategy Report.

## CURRENT CONDITION



View of the Site from Milltown Rd.



View of the Site from Sandford Rd.



A double line of alternating limes and cherry cultivars on Cherryfield Avenue Lower.



Entrance View of the Site from Sandford Rd.

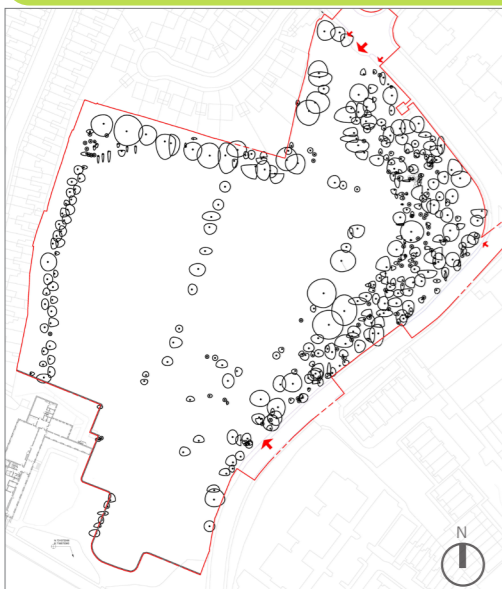


Existing tree within the site boundary



Atlantic blue cedar (#110).

## EXISTING TREES

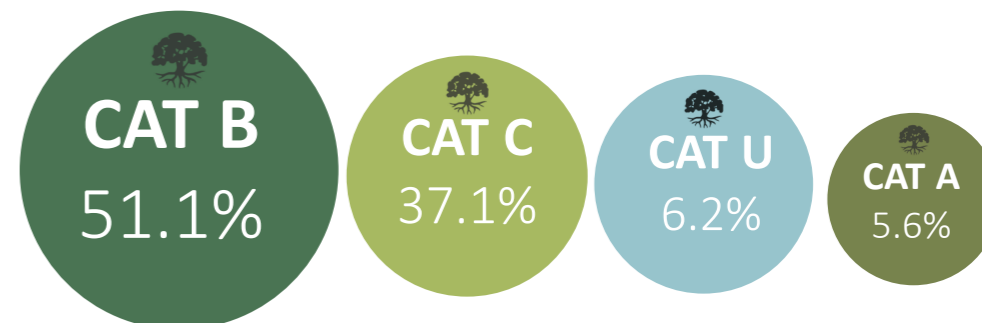


**404no.**  
existing trees



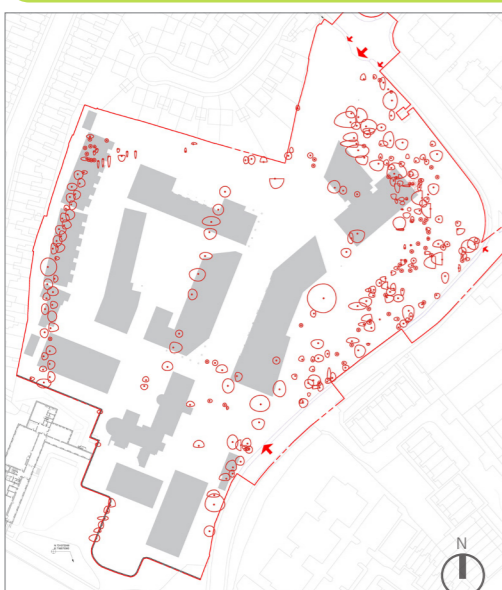
A total of 404 trees were identified and assessed.

- The condition of the trees is generally moderate to good
- Relatively high spread within categories B and C.
- The main concentration of trees is located to the east of the site bordering Milltown Road.



*Note: % of the total number of the existing trees*

## REMOVAL TREES

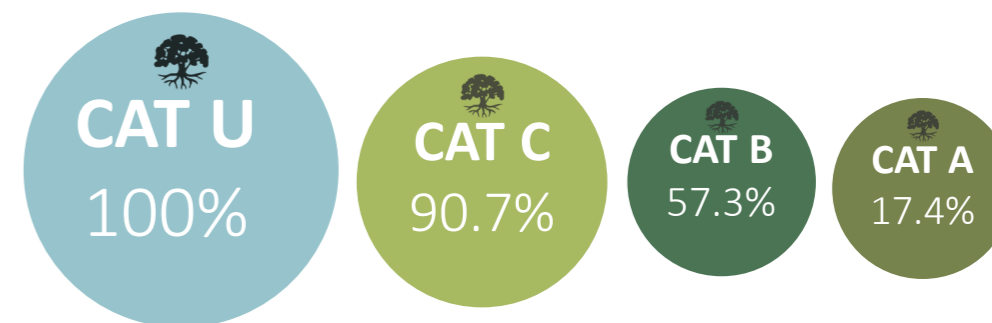


**283no.**  
Removal trees



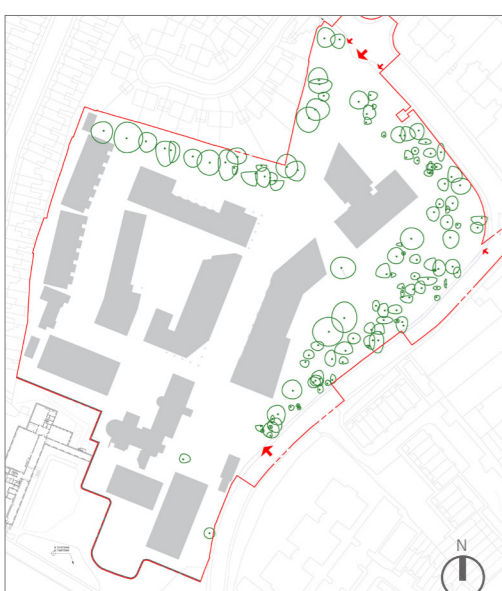
A total of 283 trees will be removed in the area.

- Only 4 category A trees will be removed
- The removal of trees will be most pronounced on the western boundary and within the central section of the site where the main footprint of the development is located.



*Note: % of the total in category*

## RETAINED TREES

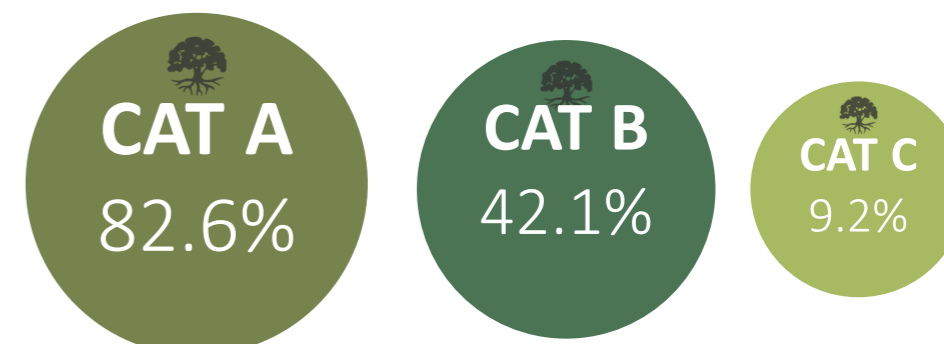


**121no.**  
Retained trees



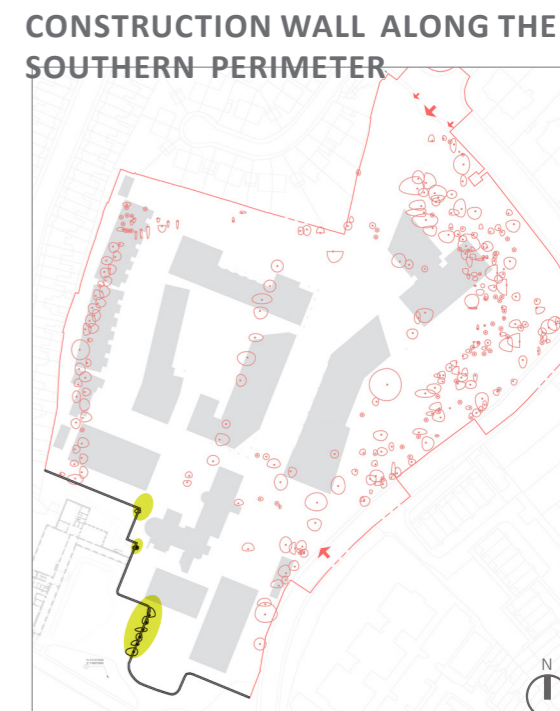
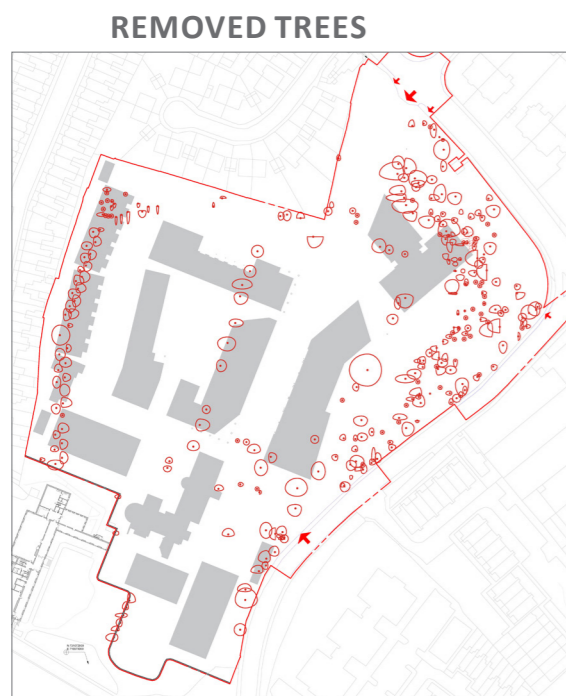
A total of 121 trees will be retained at the site.

- The higher value trees will also be retained on the northern boundary with this section of the site essentially linking to the open space area to the east creating a sylvan edge to both boundaries.
- To improve the quality and usability of the open space areas to the north and east of the site the poor-quality category C\*\* trees are recommended for removal.



*Note: % of the total in category*

## REMOVED TREES TO FACILITATED THE DEVELOPMENT.



Category U trees and Category C trees of very high density, which is the result of limited management interventions, restricts light from penetrating the canopy thereby reducing the diversity potential of the ground flora and also the areas overall habitat and recreational potential.

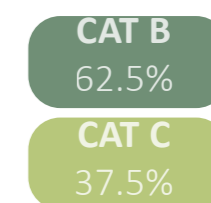
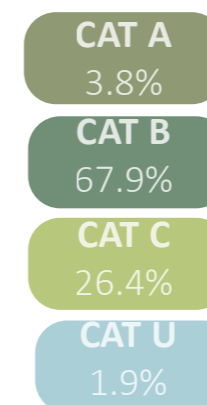
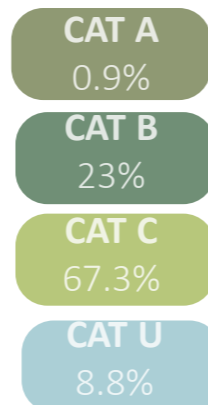
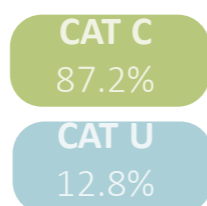
The plan shows the direct impact of the proposed development will necessitate the removal of 50.5% of the existing category B & C trees and a single category A tree. Design and position of the building block has been influenced by existing trees layout.

The plan shows the underground services proposed in relation with the existing trees. The location of the services have taken in consideration the suitable location in order to have a less impact on the existing trees in the area.

This plan shows trees impacted by the construction of the southern wall.

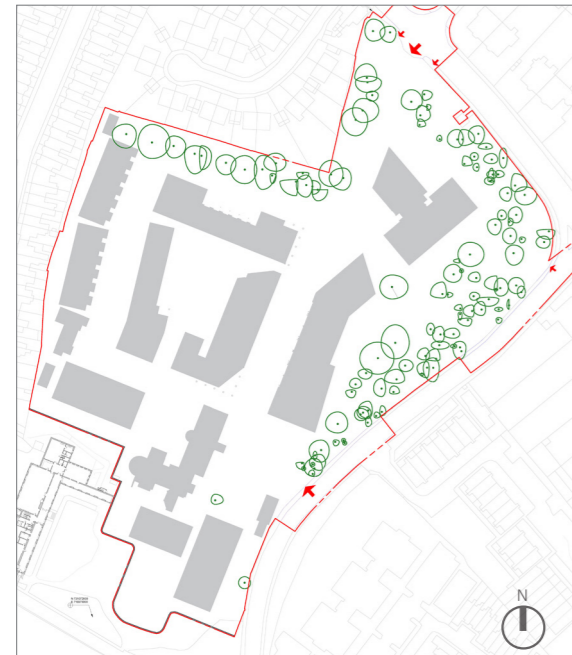


Note: These figures are expressing from the total effected by cause (109, 113, 53, 13)

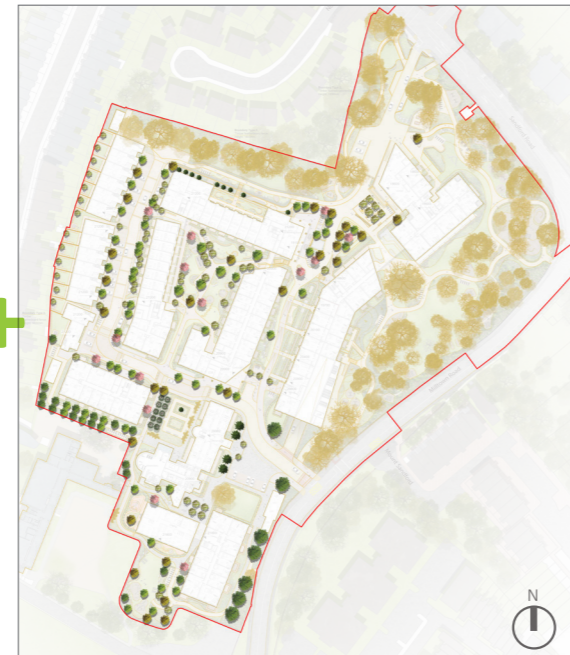


## TREES STRATEGY AT SANDFORD DEVELOPMENT

### RETAINED TREES



### PROPOSED TREES



**121no.**  
Retained trees



**238no.**  
large multi-stem and large shrubs are proposed across the development overall.



**121+238no.**  
Trees /large multi-stem and shrubs will be represent the Sandford soft strategy layout

Tree protection and enhancement was a key tenet of the proposed design. The trees that will be removed will be replaced by a significant number of large and medium size trees that will have a greater long term benefit to local ecology and biodiversity. Our design will include native species trees and shrubs. Ground cover and understory layer will be set out to maximise local habitats for roosting birds and mammals. Proposed planting will be set-out to encourage and support the local bee and insect families. This too will include planting which supports berry, nuts etc for other mammals.

## PROPOSED TREES SPECIFICATION



**238no.**

large multi-stem and large shrubs are proposed across the development overall.



approx. **28.06** tonnes/CO2 per year.  
Proposed tree absorb CO2 at a rate of 260pound/CO2 per tree each year

## SUMMARY TABLE

EXISTING TREES	404 No.
TREES TO BE REMOVED	283No.
TREES TO BE RETAINED	121No
PROPOSED LARGE SHRUBS/MULTI STEM TREES	238No.

## PROPOSED TREES SPECIFICATION




SPECIES NAME	Size/Specification		
	Condition Multi steam (ms)- Singular steam (st)	Height, meter	Girth Diameter, cm
<b>Medium/Large trees</b>			
Betula pubescent	ms	6.0/7.0	
Cupressus sempervirens	st	7.0	35-40
Carpinus betulus "Lucas"	st	6.0/7.0	35-40
Liquidambar styraciflua	st	6.0/7.0	35/40
Fraxinus excelsior	st	6.0/7.0	35/40
Taxus baccata	st	5.0-6.0	35/40
Quercus rubur	st	6.0/7.0	35/40
<b>Small trees</b>			
Acer griseum	1.5/2m ms	4.5-5.5	
Corylus avellana "Red majestic"	1.5/2m ms	4.0-5.0	
Amalanchier "Price William"	1.5/2m ms	4.5-5.5	
Magnolia kobus	1.5/2m ms	4.5-5.5	
Prunus avium	1.5/2m ms	4.5-5.5	
Sorbus aucuparia	st	4.5-5.5	
<b>Espalier Trees</b>			
Malus "Evereste"		2.0	20-25
Tilia europaea 'Pallida' (Pleaced lime)		2.0	20-25
Pyrus communis		2.0	20-25
<b>Fruit Trees</b>			
Malus "Evereste"	//	2.5/3	//

## TREES IN RELATION TO LANDSCAPE DESIGN

### RETAINED TREES AND SURFACE LEVELS

The plans shows the comparason of the existing levels across the site and the proposed landscape plan.

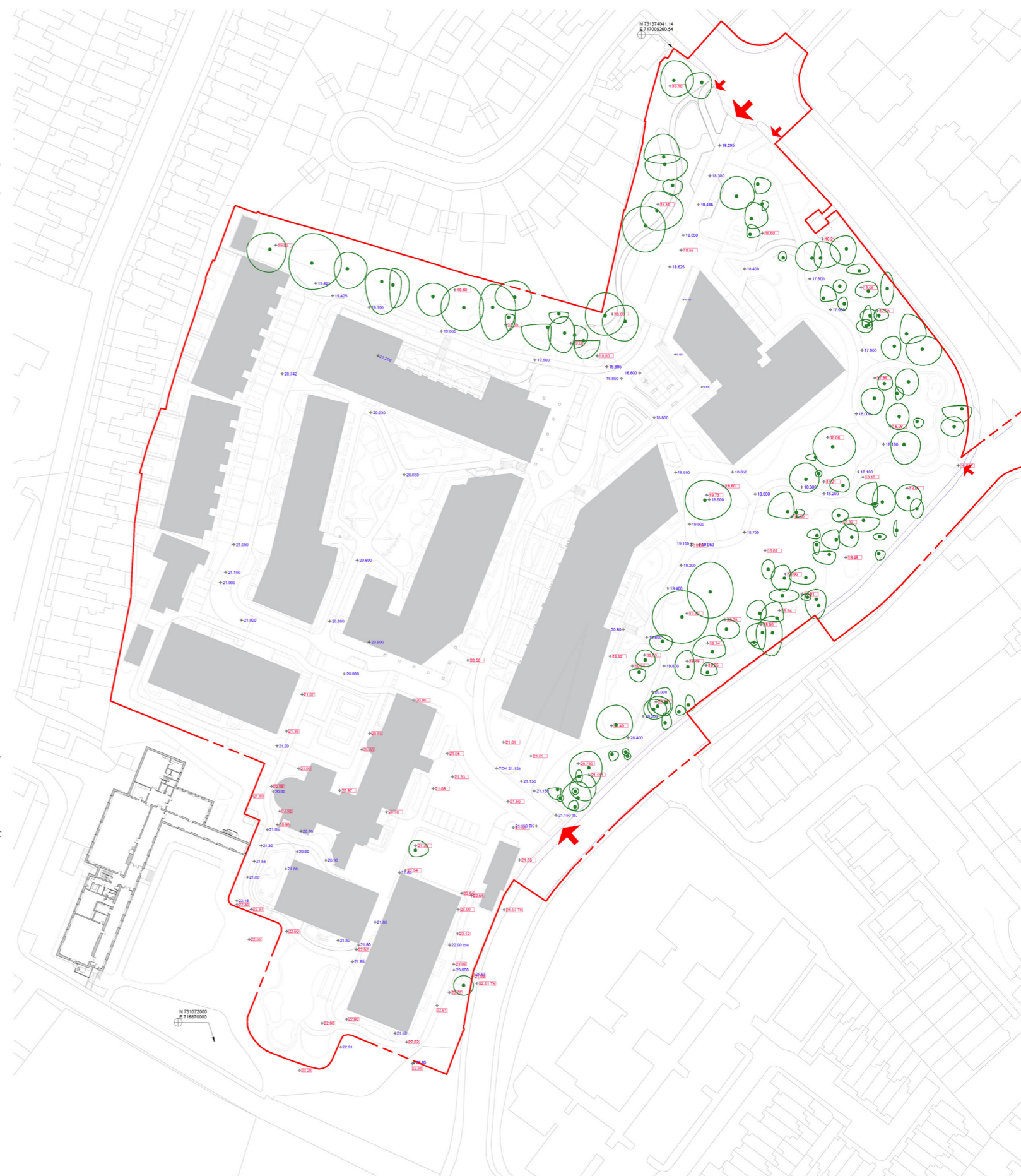
As a principle the surface levels along the perimeter of the development will be maintained as per the existing condition and the proposed level will tie in with these. Careful attention has been paid to the existing levels surrounding any retained trees within the scheme as indicated on plan.

-  Retained existing tree
-  Existing surface levels
-  Proposed landscape levels

This section is designed to outline the main considerations undertaken during the design process.

In order to not damage the existing trees which would be retained in that area, the following considerations have been contemplated:

- » Existing ground levels, in the proximity of the existing trees will be remained as they currently are.
- » The walkway network will have a specific build-up that will guarantee the protection of the existing trees.





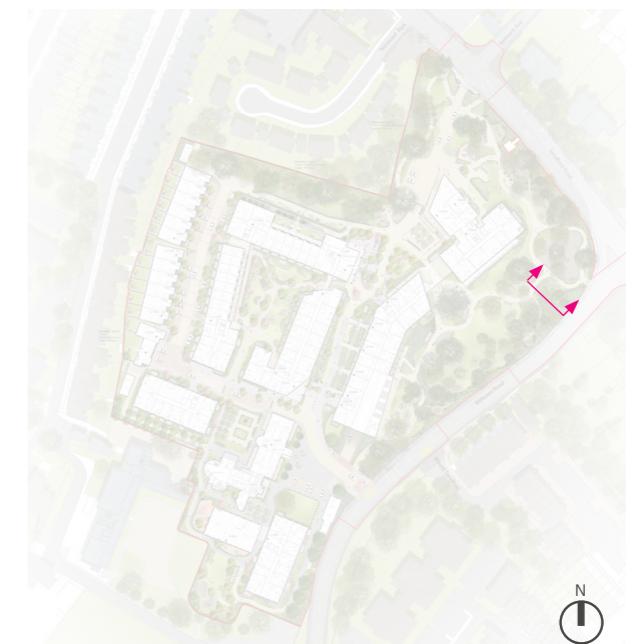
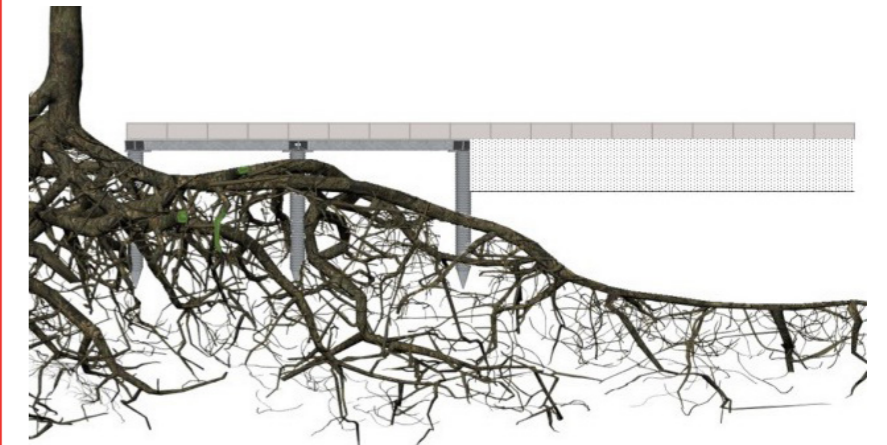
## TYPICAL LANDSCAPE SECTION ALONG THE AREA WHERE THE EXISTING TREES WILL BE RETAIN



--- Indicative RPA

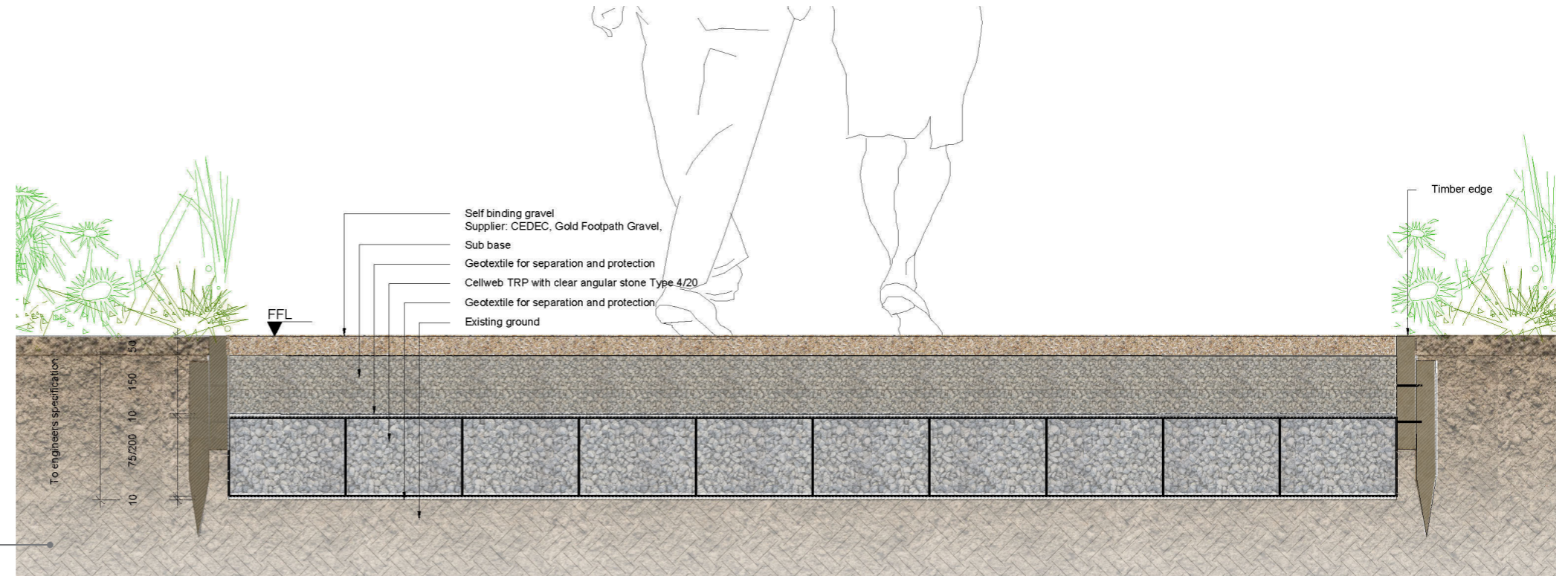
The positions of the different boundary options and landscape structures (such as low retaining wall) the RPA of the existing trees that will be retained. Further inspection of the roots to be under taken at pre-construction stage to avoid roots damage. A bridge beam system will be installed within the timber post foundation.

### TYPICAL EXAMPLE OF ROOT BRIDGE

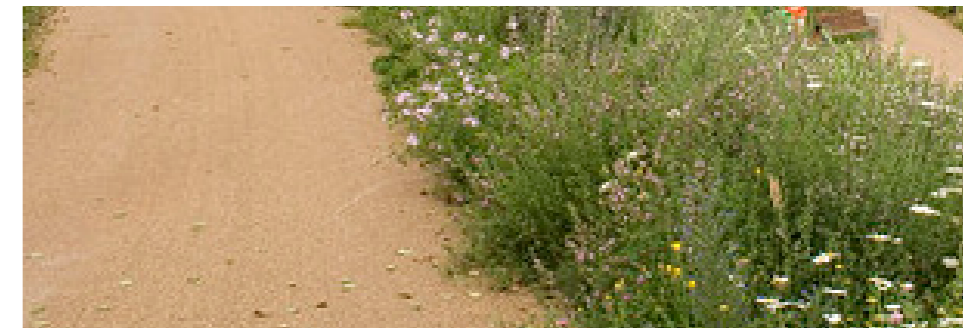
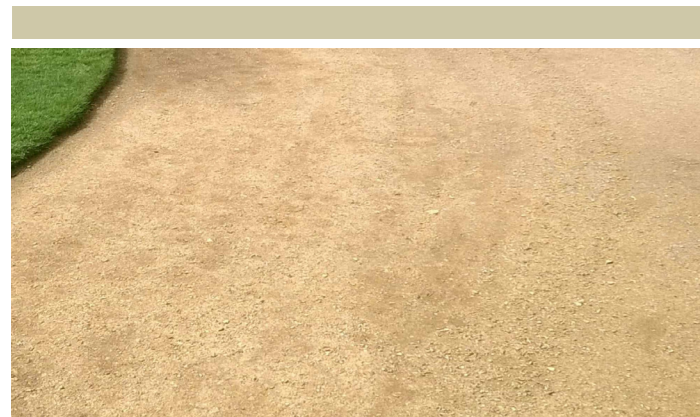
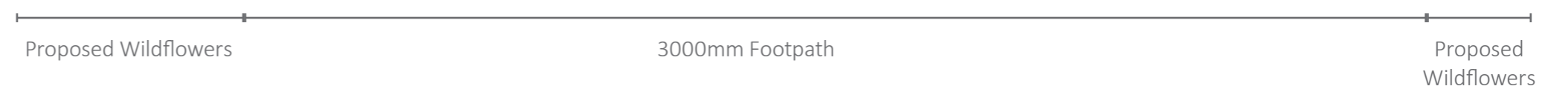


# TYPICAL HARDSCAPE BUILD-UP: SELF BINDING GRAVEL WITH CELLULAR CONFINEMENT SYSTEM

A cellular confinement system specifically designed for tree root protection Such as CellWeb (product) is recommended. The system creates a permeable and stable, load bearing surface for traffic or footfall whilst eliminating damage to roots through compaction and desiccation of the soil.



**Paving Type 4. Product: Self Binding Gravel**  
 (Cycle and pedestrian walkway)  
 Colour: Golden Amber or Similar Approved  
 Supplier: Breedon Aggregates or Similar Approved



## TREES IN RELATION TO DESIGN DEMOLITION AND CONSTRUCTION BS 5837:2012

This section is designed to outline the procedures which will be undertaken to effectively retain trees free from adverse construction impacts for the duration of the construction period on the site.

### Pre-construction meetings/tree works

- » An on-site meeting will be held if required, with all relevant parties; including the Developer and or his Agents, Site Arborist and Local Planning Authority
- » Remedial works to trees throughout the site where indicated as necessary within the Tree Works Schedule. All works will be undertaken to BS 3998 2010 Tree Work and/or to current best practice.
- » Erection of tree protection fencing as per recommendations contained within BS 5837:2012 Trees in relation to design, demolition and construction
- » Recommendations. Tree protection to be erected under supervision of Site Arborist prior to main construction works being undertaken on site (*refer to drawings Tree Protection TSAN001 107 to TSAN001 109 inclusive*).

### Construction period

- » The Site Arborist shall monitor tree protection. The Site Arborist shall specify any necessary remedial works to trees which may arise due to construction works.
- » The Main Contractor shall carry out any instructions made by the Site Arborist with regard to the protection of retained trees and ensure where necessary that these instructions are followed by any sub-contractors.

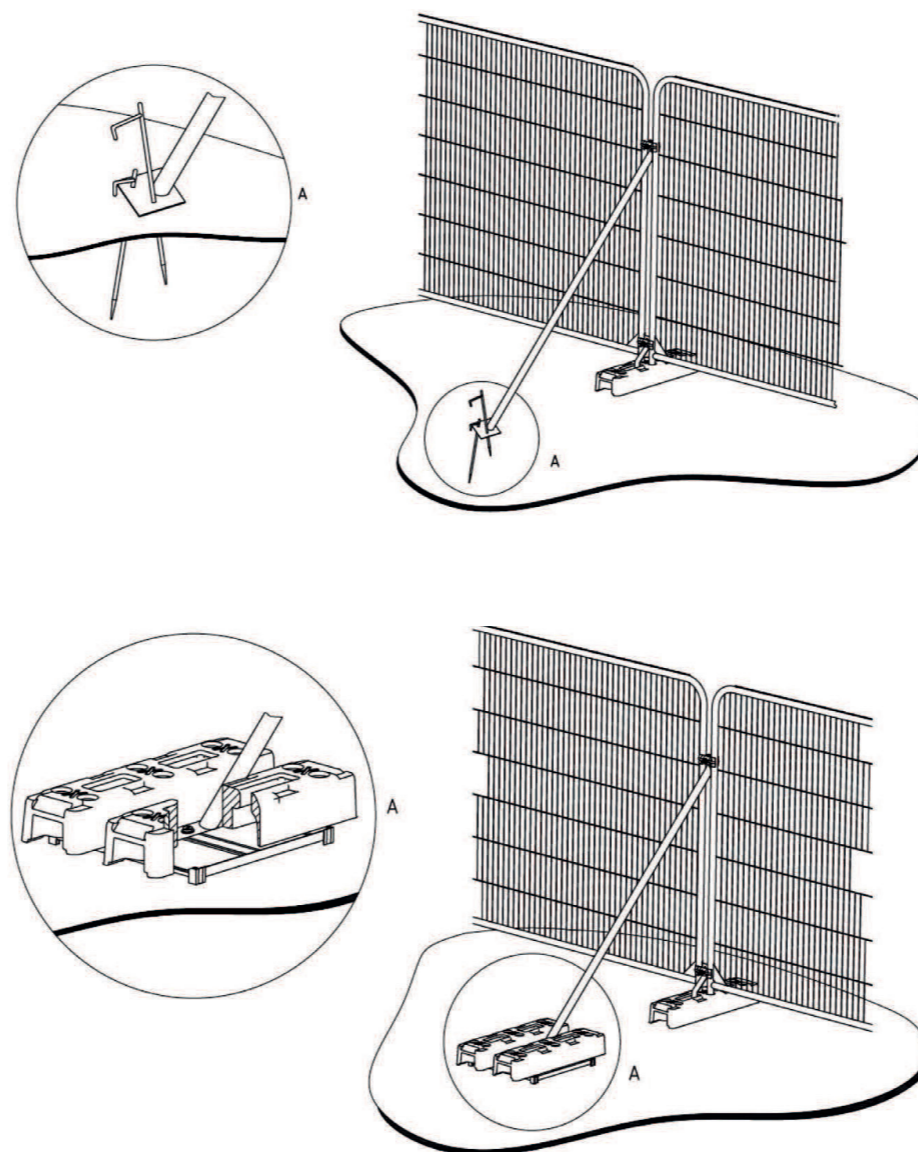
### Post construction works will consist of:

- » Re-survey of retained trees and the implementation of measures contained with the survey document.

In order to guarantee the retention of the existing trees the Contractor should take all precautions to ensure that any trees which are not required to be taken down under the contract shall remain undisturbed and undamaged. All works to trees and all operations adjacent to trees should be undertaken in accordance with the Code of Practice. The Contractor must appoint a qualified arboricultural contractor to undertake all tree works

### EXAMPLES OF ABOVE-GROUND STABILIZING SYSTEM

STABILIZER STRUT WITH BASE PLATE SECURED WITH GROUND PINS



subject to approval by the Consulting Arborist. The Contractor shall undertake no works to trees unless instructed by the Contract Administrator. All works on or within the Construction Exclusion Zone are to be supervised by the site arborist. Five working days notice of intention to undertake works to be given.

A number of specimen trees will be retained in close proximity to proposed buildings. These include a mature well-developed Atlantic blue cedar ( *Cedrus atlantica* 'Glauca') (#110). It has been retained following extensive discussions between the project arboriculturist and the design team and has become an integral element of the proposed development.

The building layout and associated services have been designed to be sympathetic to the tree and it's need for adequate canopy and root clearance.

### EXAMPLES OF STABILIZING SYSTEM AROUND THE *Blue Cyprus Tree*



\*Please refer to Arboricultural Assessment Arboricultural Impact and Tree Protection Strategy Report.

# SOFTSCAPE STRATEGY
















## TREE STRATEGY

A variety of trees have been selected to enhance the characteristics of the scheme.

The following page illustrate these in more detail with key species.

A total of 238no. large multi-stem and large shrubs are proposed across the development overall.

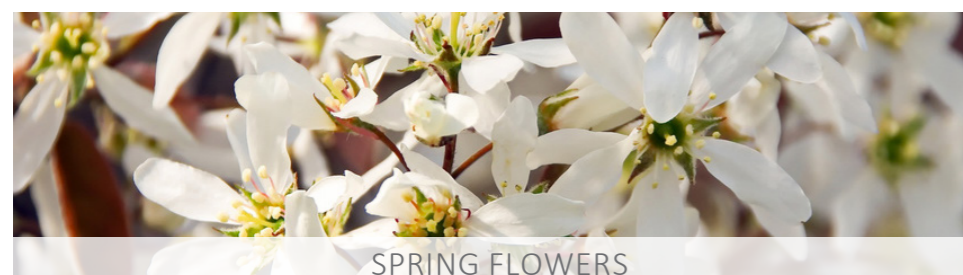
### Large shrubs- Trees species proposed

-  *Betula pubescent* (30No.) deciduous
-  *Liquidambar styraciflua* (38No.) deciduous
-  *Corylus avellana "Red majestic"*(19No.) deciduous
-  *Amalanchier "Price William"* (55No.) deciduous
-  *Acer griseum* (14No.) deciduous
-  *Carpinus betulus "Lucas"* (8No.) deciduous
-  *Cupressus sempervirens* (4No.) evergreen
-  *Magnolia kobus* (6No.) deciduous
-  *Espalier trees* (10No.)
-  *Malus "evereste"* (10No.) deciduous
-  *Fraxinus excelsior* (5No.) deciduous
-  *Taxus baccata* (2No.) evergreen
-  *Prunus avium* (10No.) deciduous
-  *Quercus rubur* (4No.) evergreen
-  *Sorbus aucuparia* (23No.) deciduous

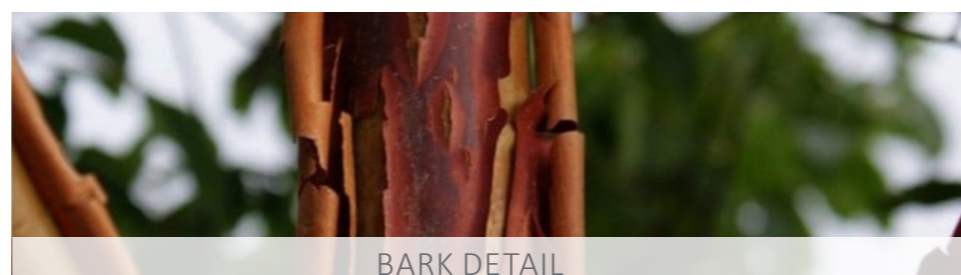


## TREES SPECIES

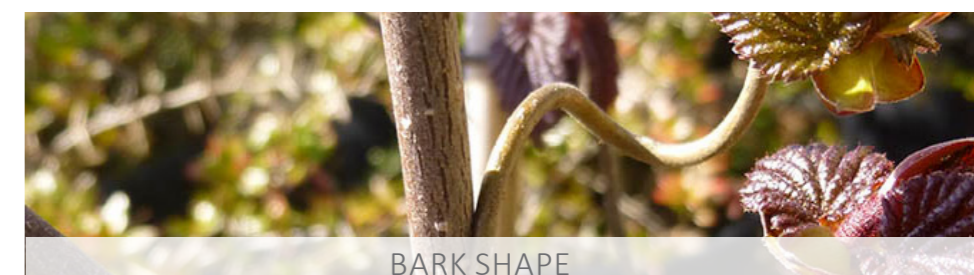
Small multi-stem trees, with 2-2.5m clear stem



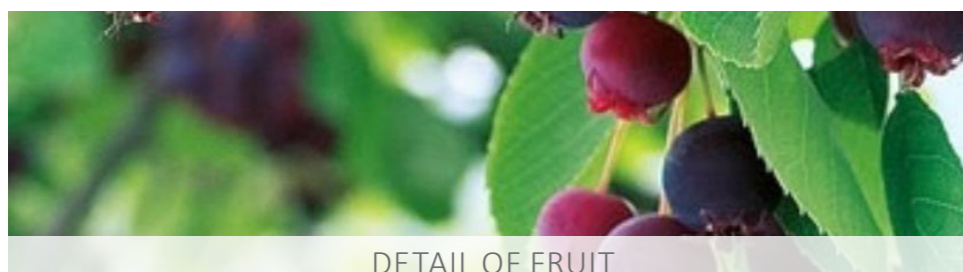
SPRING FLOWERS



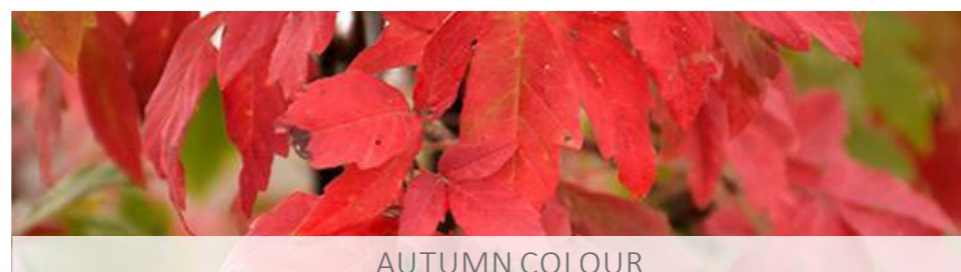
BARK DETAIL



BARK SHAPE



DETAIL OF FRUIT



AUTUMN COLOUR



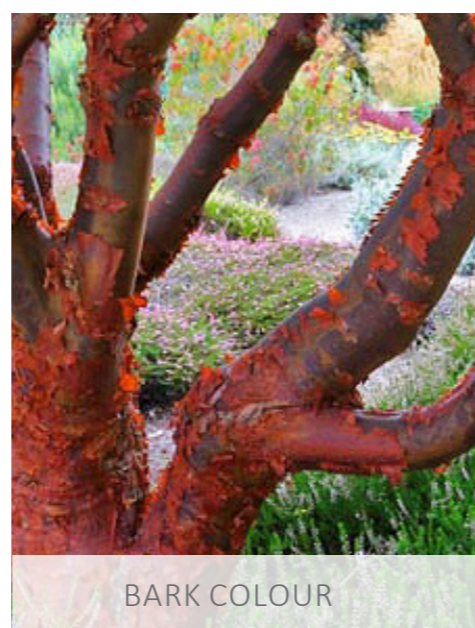
AUTUMN CATKINS



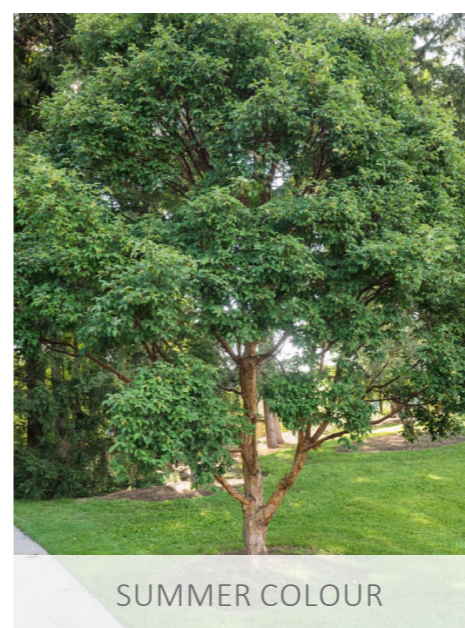
SUMMER COLOUR



SPRING COLOUR



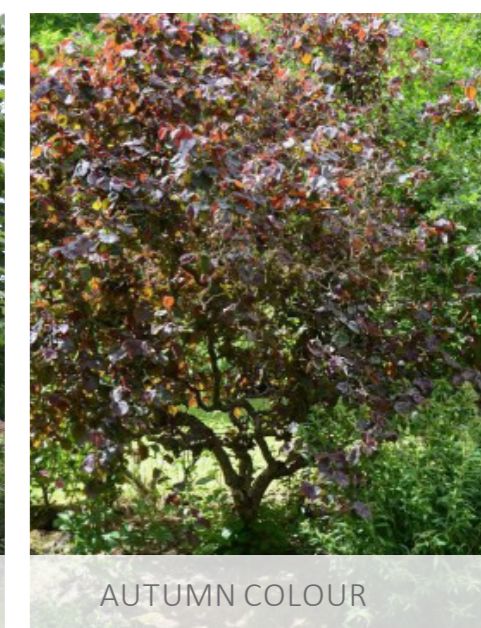
BARK COLOUR



SUMMER COLOUR



SUMMER COLOUR



AUTUMN COLOUR



### *Amelanchier "Prince William"*

Amelanchier Prince William is a deciduous small tree or shrub with large star shaped pure white flowers in March to April and June. Produces small dark reddish purple fruits after flowering

Ultimate height: 4-6 meters  
 Ultimate spread: 3-5meters  
 Time to ultimate height: 8-12years



### *Acer griseum*

Is a small spreading deciduous tree with attractive peeling, papery chestnut-brown bark. Leaves with 3 leaflets, downy and whitish beneath, turning brilliant red and orange in autumn.

Ultimate height: 4-6 meters  
 Ultimate spread: 3-5meters  
 Time to ultimate height: 8-12years



### *Corylus avellana 'Red Majestic'*

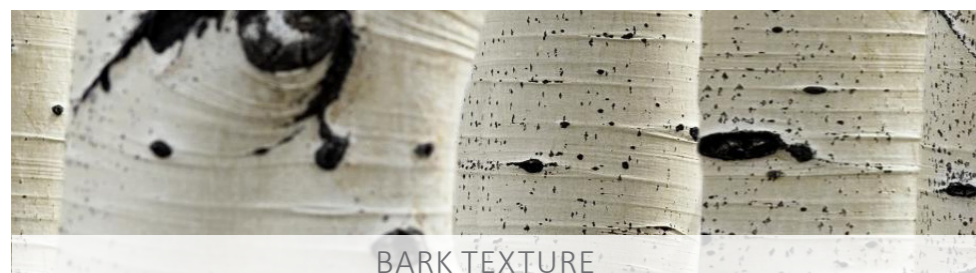
Corylus 'Red Majestic' is a beautiful small tree which is known for its unique twisted shoots.

Ultimate height: 4-6 meters  
 Ultimate spread: 3-5meters  
 Time to ultimate height: 8-12years

# SOFTSCAPE STRATEGY

## TREES SPECIES

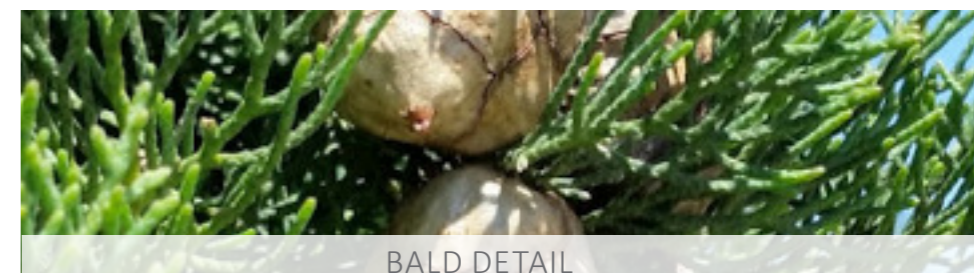
Medium/large trees



BARK TEXTURE



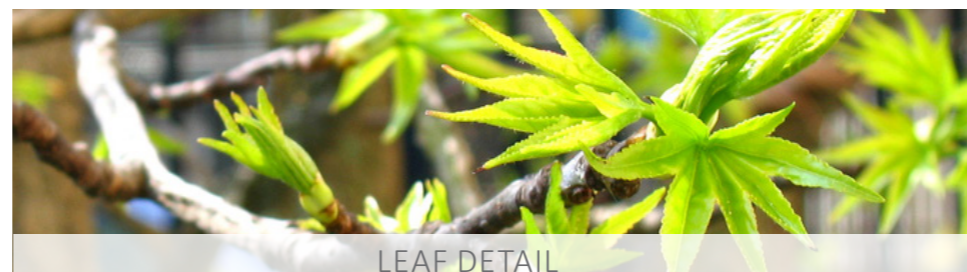
BARK TEXTURE



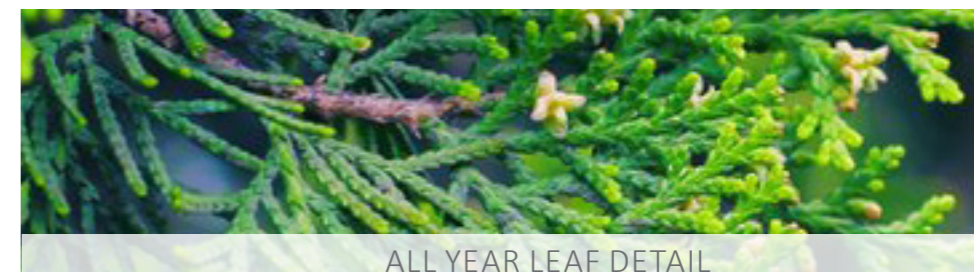
BALD DETAIL



AUTUMN COLOUR



LEAF DETAIL



ALL YEAR LEAF DETAIL



SUMMER COLOUR



AUTUMN COLOUR



SEASONAL COLOURS



ALL YEAR COLOUR



### *Betula pubescens*

Downy birch is an elegant medium-sized deciduous tree with slender drooping twigs. Bark white, becoming black and rugged at base. Leaves ovate, yellow in autumn. Flowers in catkins.

Ultimate height: 12 meters

Ultimate spread: 8 meters

Time to ultimate height: 10-20 years



### *Liquidambar styraciflua "worplesdon"*

'Worplesdon' is a broad-crowned medium-sized deciduous tree with five-lobed, maple-like leaves which turn to deep orange and yellow in autumn.

Ultimate height: 12 meters

Ultimate spread: 8 meters

Time to ultimate height: 10-20 years



### *Cupressus sempervirens*

Cupressus sempervirens is a medium-sized coniferous evergreen tree with a conic crown with level branches and variably loosely hanging branchlets. It is very long-lived, with some trees reported to be over 1,000 years old.

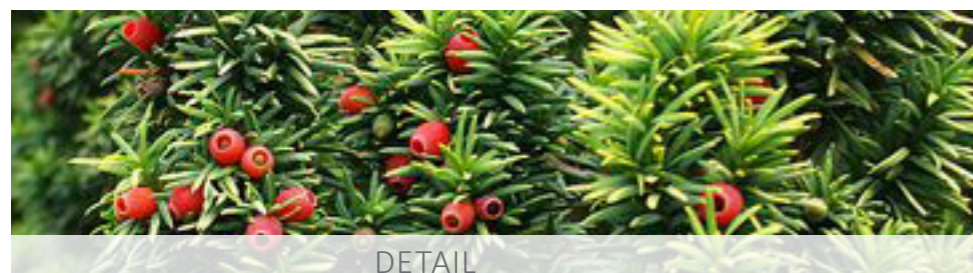
Ultimate height: 25meters

Ultimate spread: 4 meters

Time to ultimate height: 20-30years

## TREES SPECIES

Medium/large trees



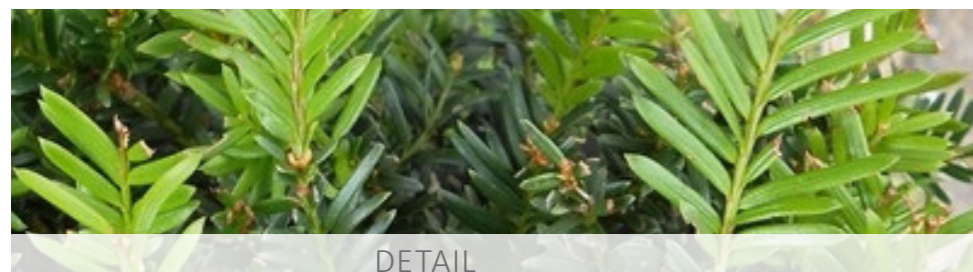
DETAIL



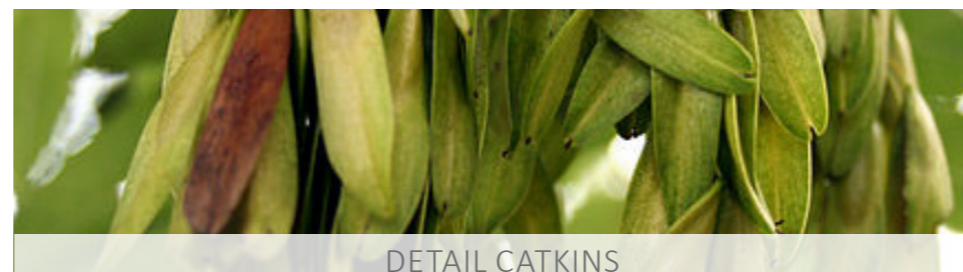
DETAIL



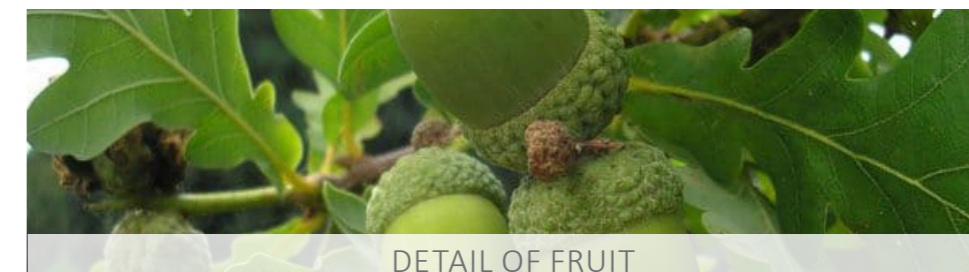
LEAF DETAIL



DETAIL



DETAIL CATKINS



DETAIL OF FRUIT



LEAF DETAIL



LEAF DETAIL



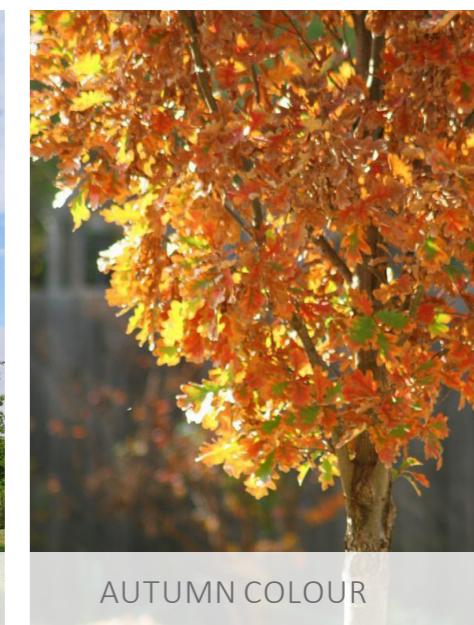
AUTUMN COLOUR



SUMMER COLOUR



SUMMER COLOUR



AUTUMN COLOUR



### *Taxus baccata*

Taxus are small evergreen trees or large shrubs of rounded habit, with dense, linear leaves, insignificant flowers and, on female plants, conspicuous fleshy red arils surrounding the solitary seeds

Ultimate height: 3-4meters  
 Ultimate spread: 1-5meters  
 Time to ultimate height: 10-15years



### *Fraxinus excelsior*

F. excelsior is a vigorous deciduous tree to 25m, with pale brown bark, dark green, pinnate leaves and small deep purple flowers, followed by conspicuous bunches of winged fruits in late summer and autumn

Ultimate height: +12 meters  
 Ultimate spread: 8meters  
 Time to ultimate height: +10years



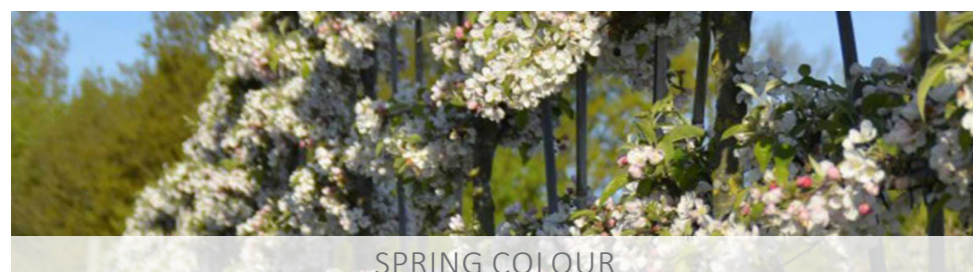
### *Quercus rubur*

Q. rubur is large, long-lived deciduous tree. Oak species also have an important ecological role, as they support insects and their acorns provide a valuable food source for many birds and mammals. The canopy of oaks allows a fair amount of light to pass through, permitting a diverse and enriched understory

Ultimate height: +12 meters  
 Ultimate spread: 8meters  
 Time to ultimate height: +10years

# SOFTSCAPE STRATEGY

## ESPALIER TREES



### *Malus "evereste"*

Produce an abundance of remarkably large, sweetly fragranced, white cup-shaped flowers in the springtime, opening from vibrant red flower buds that gradually fade to a beautiful pink as the new foliage also unfurls.



### *Pyrus communis*

Pyrus are deciduous trees or shrubs with oval leaves and scented white flowers in spring.



### *Tilia europaea 'Pallida'*

Is a large deciduous tree. The base of the trunk often features burrs and a dense mass of brushwood. The leaves are thinly hairy with tufts of denser hairs in the leaf vein axils



## TYPICAL SOFT LANDSCAPE SECTIONS ON PODIUM AND TERRACES

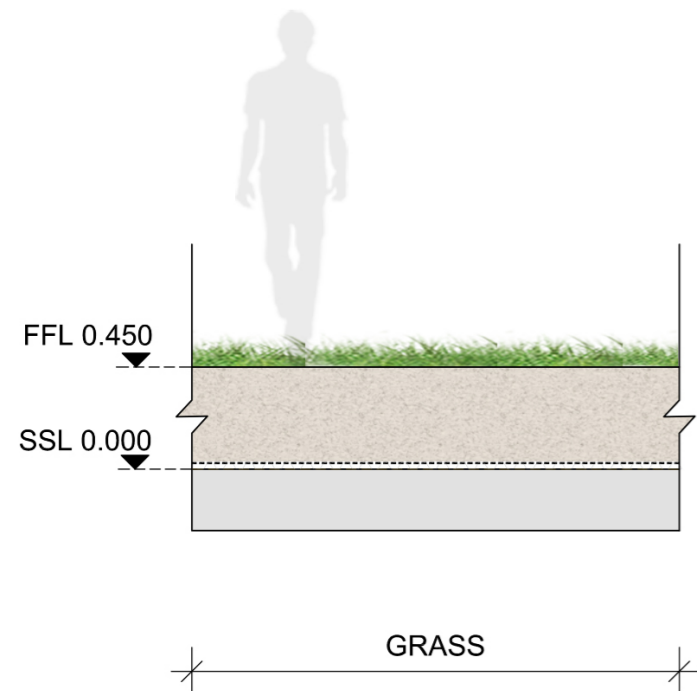


More than 50% of the garden will be built on the slab of the parking area below ground. Whilst this may seem challenging to maintain a healthy and working landscape, it is perfectly possible as long as the minimum required soil depth is provided for the plants.

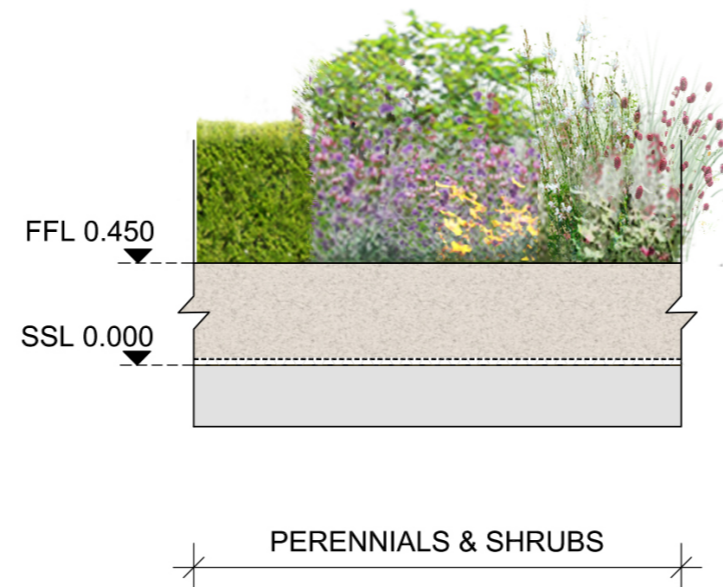
A wide range of plants will do very well in this area. The key for podium planting, as in any traditional

border design, is to choose the right plant for the situation. As a general rule, with 150mm, it is possible to grow amenity turf, given appropriate irrigation and regular feeding. With 300mm of growing medium, a good range of small shrubs and herbaceous perennials will be perfectly happy, and there is always the option of localised mounding over areas with extra structural support for smaller trees.

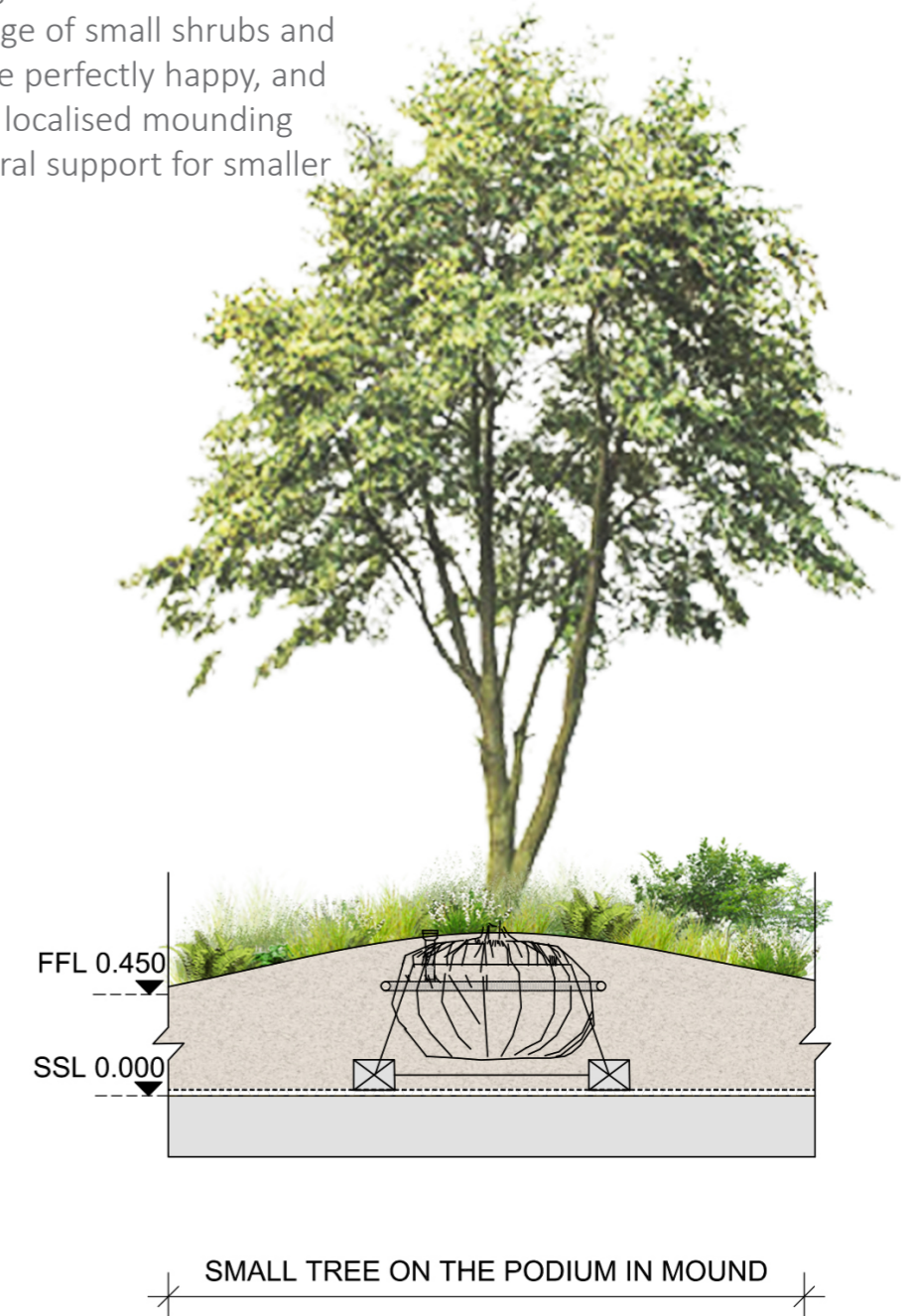
— Basement outline



Preferred soil depth for amenity lawn: 450mm.



Preferred soil depth for small shrubs and herbaceous planting: 450mm.  
For larger shrubs: 600mm.

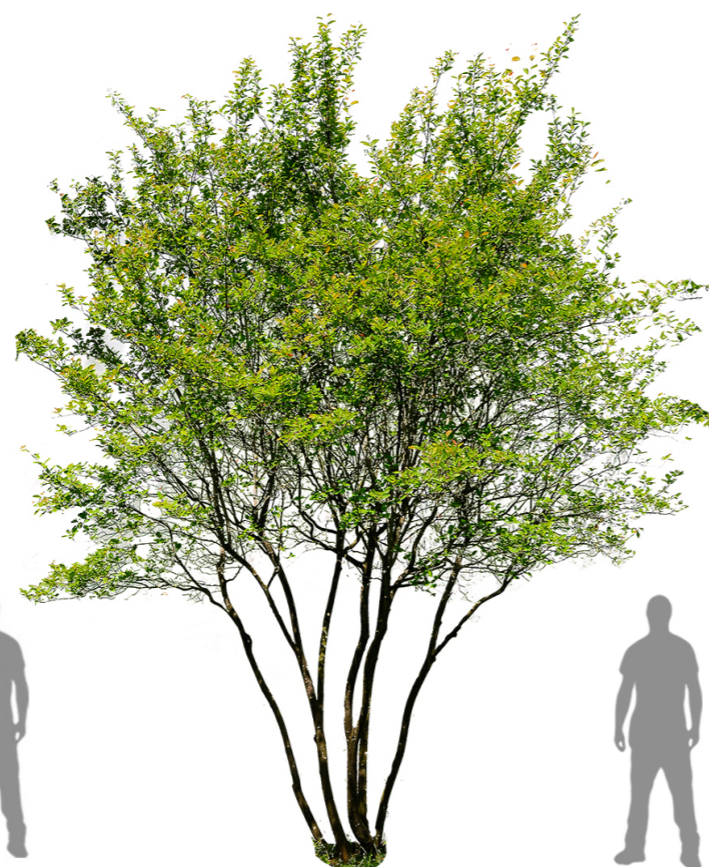


Preferred soil depth for small multi stem trees which do not grow higher than 3-4 meters: Min. 750-800mm.  
For larger trees: minimum 1000mm.

## PLANTING TYPES



Clear stem, semi-mature tree has a single, upright, clear stem up to 2-2.5m from the ground before the canopy starts. These type of trees are proposed along the main pedestrian and vehicular routes and in key landscape areas. The required height of the multi-stem trees is: 3.5-4 m.



A multi-stem tree: has multiple stems, branching from the ground. The cloud-like canopy starts around 1.5-2m above ground. These type of trees were used to achieve privacy and help separate the residential and retail areas. They also help mark the key locations in the landscape, such as entrances and access points. The required height of the multi-stem trees is: 3-3.5 m.



Herbaceous planting has no persistent woody stems above ground. These plants grow fast and produce flowers and many seeds in a short period of time. They have an important role in the biodiversity, because they can provide habitat and food for wildlife. The height of the proposed herbaceous planting is approx. 0.3- 1.3 m.



Ground covers provide protection of the topsoil from erosion and drought. In an ecosystem, the ground covers forms the layer of vegetation below the shrub/herbaceous layer. The height of the proposed perennial planting is approx. 0.1- 0.3m.



The shrub palette are used as separation between the different functions in the urban realm. In addition they have an important role in the biodiversity, because they can provide habitat and food for wildlife. The required height for the proposed shrubs is: 0.8- 1.5m.



Clipped shrubs are used to give privacy and help separate the areas. The required height for the proposed hedges is: 1- 1.5m.

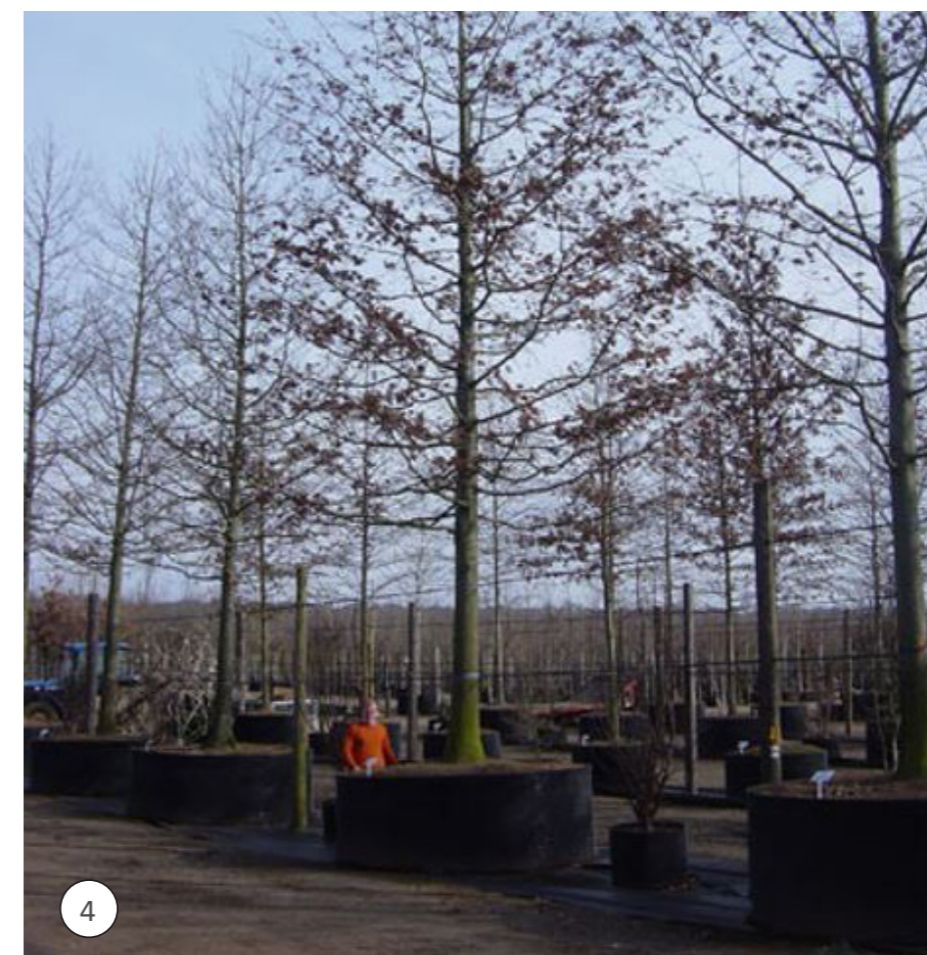
## TREE TYPOLOGIES & SIZES

To help communicate the type of trees proposed in the scheme this section sets out examples of the stock sizes currently proposed. The final sizes and specification subject to detail design post planning.

It is important to note the height and root ball sizes of proposed single stem trees varies according to the girth and species selection. The dimensions given are a rough guide only.

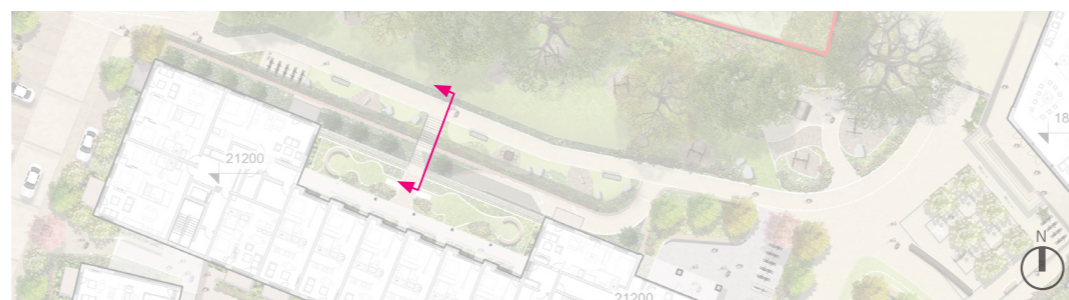
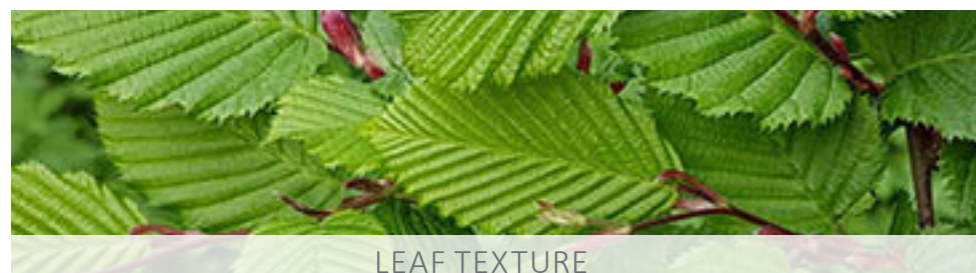
1. Girth 16-18 cm.  
Root ball size approx 50cm diameter x 50cm deep.  
Heights vary- approx 4.0-5.0 m.
2. Girth: 20-25 cm.  
Root ball size approx 80 cm diameter x 50 cm deep.  
Height of plant: approx 5.0-6.0 m.
3. Girth: 35-40 cm (on the right).  
Root ball size approx 110 cm diameter x 70 cm deep.  
Height of plant: approx 7.0-8.0 m.
4. Girth: 70-80 cm  
Root ball size: approx 180 cm diameter x 80 cm deep.  
Height of plant: approx 8-10 m.

(Note: Photos of tree sizes taken from Deepdale tree's website.)



# SOFTSCAPE STRATEGY

## TREE SPECIES PROPOSAL ON THE LOWER GROUND OF BLOCK C



### *Carpinus betulus "Lucas"*

- Narrow conical shape
- Evergreen specie
- Interesting foliage color in autumn
- Suitable for all soil types
- Wind tolerant
- Suitable for wet soil
- Resistant to frost

## TREES IN RELATION TO DESIGN DEMOLITION AND CONSTRUCTION BS 5837:2012

This section is designed to outline the procedures which will be undertaken to effectively retain trees free from adverse construction impacts for the duration of the construction period on the site.

### Pre-construction meetings/tree works

- » An on-site meeting will be held if required, with all relevant parties; including the Developer and or his Agents, Site Arborist and Local Planning Authority
- » Remedial works to trees throughout the site where indicated as necessary within the Tree Works Schedule. All works will be undertaken to BS 3998 2010 Tree Work and/or to current best practice.
- » Erection of tree protection fencing as per recommendations contained within BS 5837:2012 Trees in relation to design, demolition and construction
- » Recommendations. Tree protection to be erected under supervision of Site Arborist prior to main construction works being undertaken on site (*refer to drawings Tree Protection TSAN001 107 to TSAN001 109 inclusive*).

### Construction period

- » The Site Arborist shall monitor tree protection. The Site Arborist shall specify any necessary remedial works to trees which may arise due to construction works.
- » The Main Contractor shall carry out any instructions made by the Site Arborist with regard to the protection of retained trees and ensure where necessary that these instructions are followed by any sub-contractors.

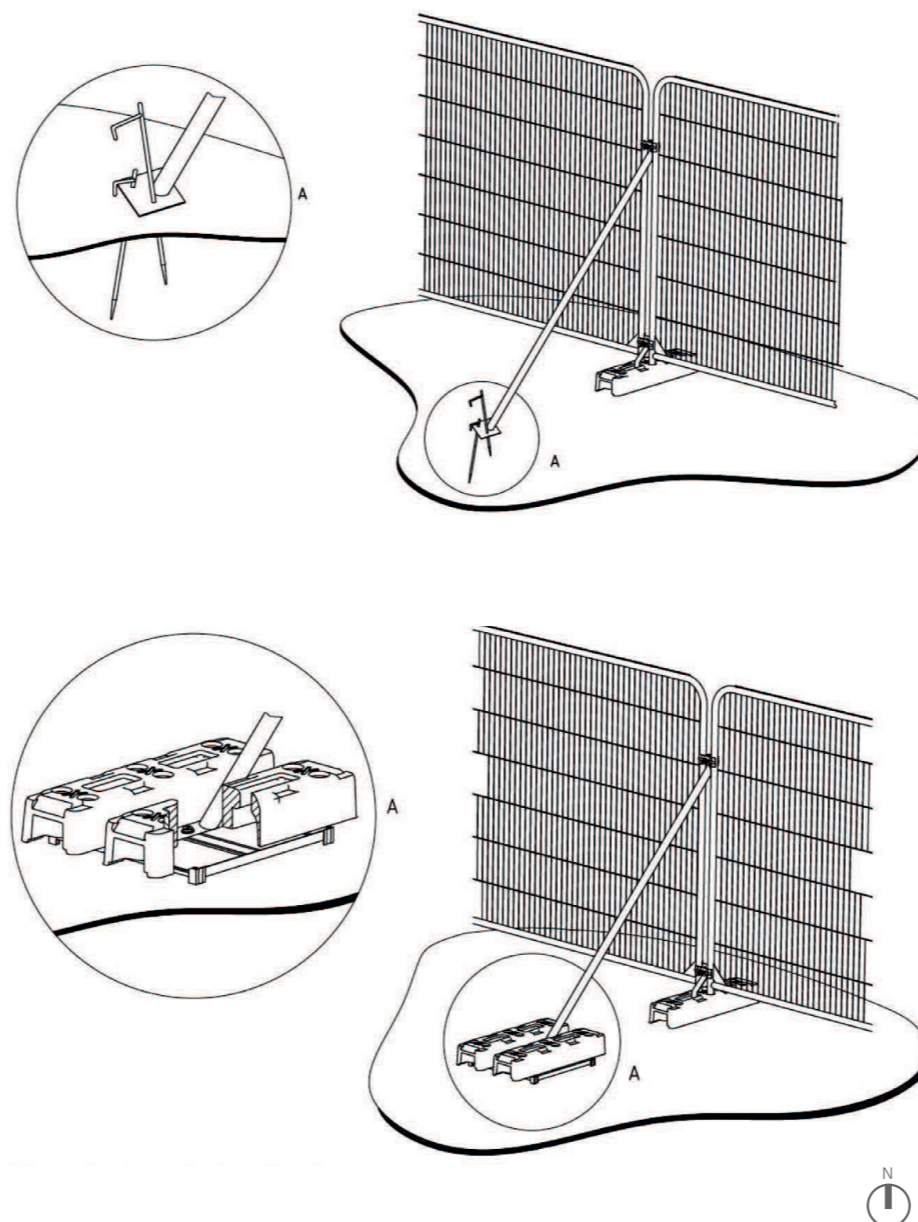
### Post construction works will consist of:

- » Re-survey of retained trees and the implementation of measures contained with the survey document.

In order to guarantee the retention of the existing trees the Contractor should take all precautions to ensure that any trees which are not required to be taken down under the contract shall remain undisturbed and undamaged. All works to trees and all operations adjacent to trees should be undertaken in accordance with the Code of Practice. The Contractor must appoint a qualified arboricultural contractor to undertake all tree works

### EXAMPLES OF ABOVE-GROUND STABILIZING SYSTEM

STABILIZER STRUT WITH BASE PLATE SECURED WITH GROUND PINS



subject to approval by the Consulting Arborist. The Contractor shall undertake no works to trees unless instructed by the Contract Administrator. All works on or within the Construction Exclusion Zone are to be supervised by the site arborist. Five working days notice of intention to undertake works to be given.

A number of specimen trees will be retained in close proximity to proposed buildings. These include a mature well-developed Atlantic blue cedar ( *Cedrus atlantica* 'Glauca') (#110). It has been retained following extensive discussions between the project arboriculturist and the design team and has become an integral element of the proposed development.

The building layout and associated services have been designed to be sympathetic to the tree and it's need for adequate canopy and root clearance.

### EXAMPLES OF STABILIZING SYSTEM AROUND THE *Blue Cyprus Tree*



— — — — — Approx. Stabilizer strut

\*Please refer to Arboricultural Assessment Arboricultural Impact and Tree Protection Strategy Report.



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