Gustafson
Porter +
Bowman

Highgate Cemetery Landscape Masterplan

Design and Access Statement

Volume 2: Landscape Design and Access Statement

Part 6 of 6

October 2024

1 Cobham Mews
Agar Grove
London NW1 9SB
+44 (0) 207 284 8950
enquiries@gp-b.com
www.gp-b.com

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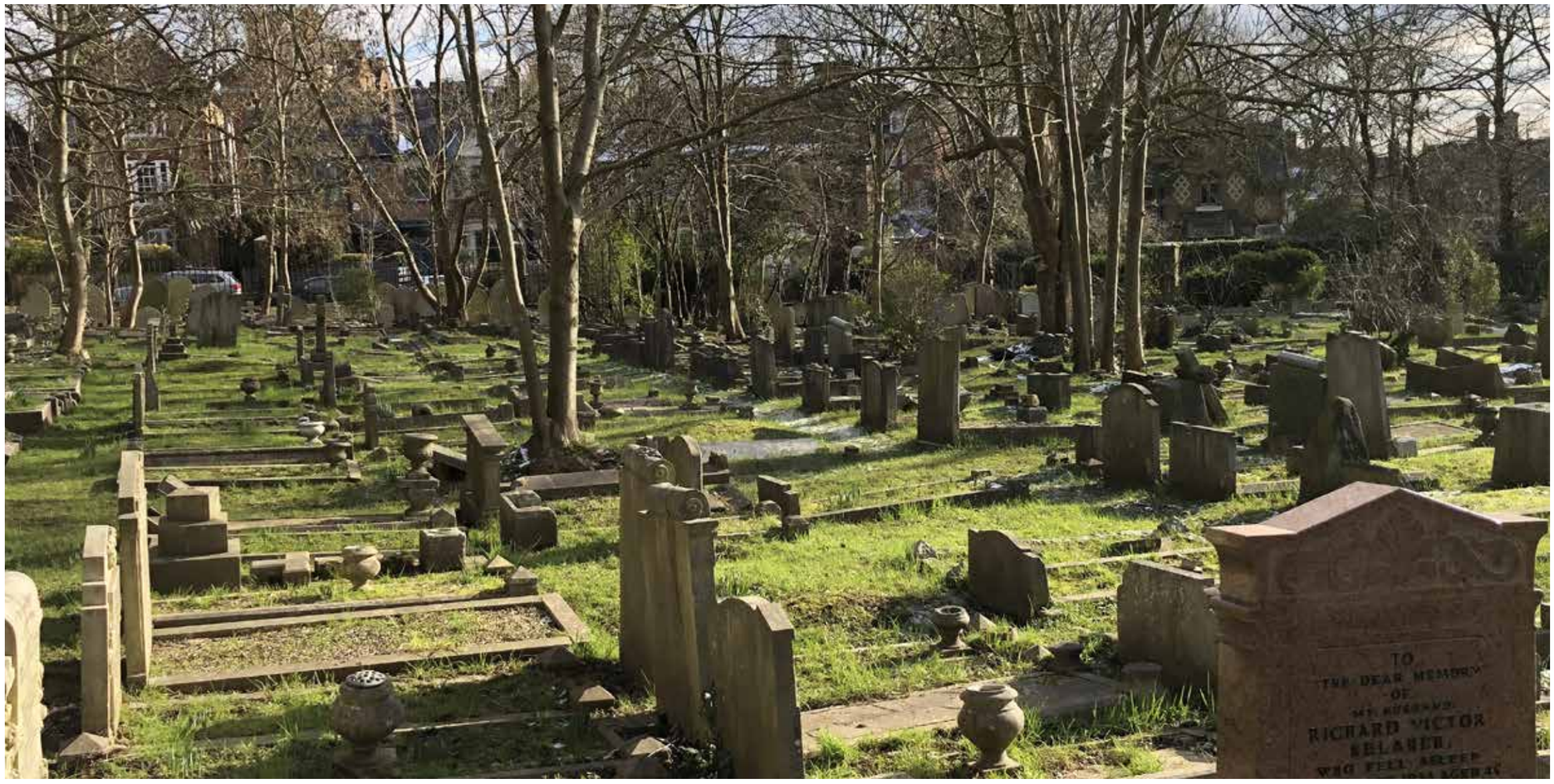

7. Appendix

7.1 Site Analysis

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The following site analysis was undertaken to better understand the conditions of the site and inform the design proposals. This included both desk research and on-site observation and can be found in more detail on the following pages. The analysis included:

Sun Studies

Soil Composition

Soil Conditions - Wet/Dry and Sun/Shade

Historic Trees

Existing Ground Cover

Existing Category A&B Trees

Young Trees with a Future

Openings in the Canopy and Clusters of unsurveyed trees

Monuments

Existing Path Uses

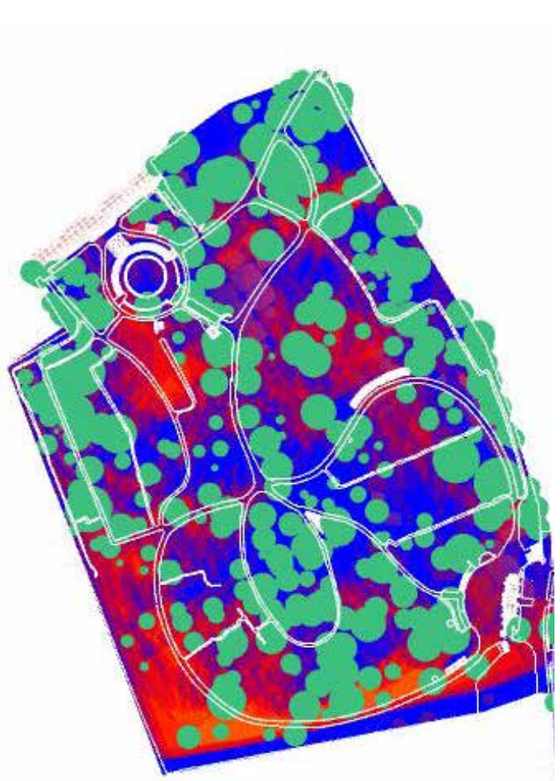
Existing Path Materials

Sun Studies with A&B Trees

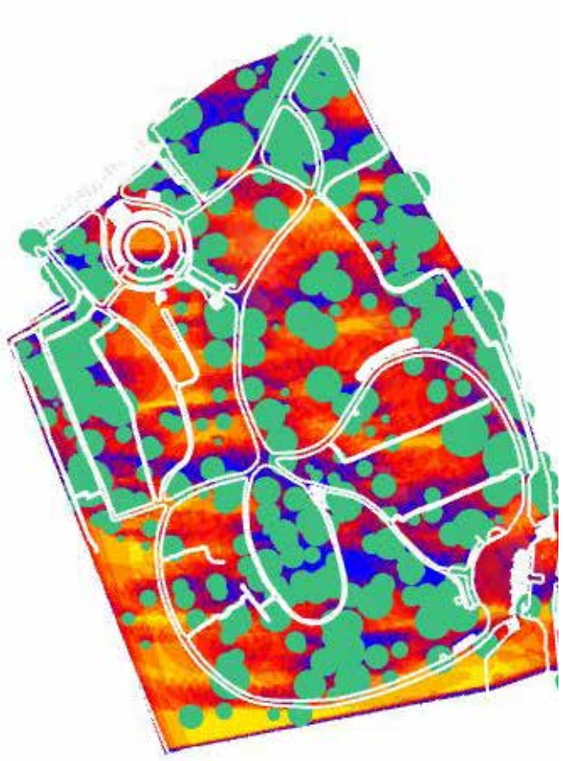
WEST SIDE

Gustafson Porter + Bowman

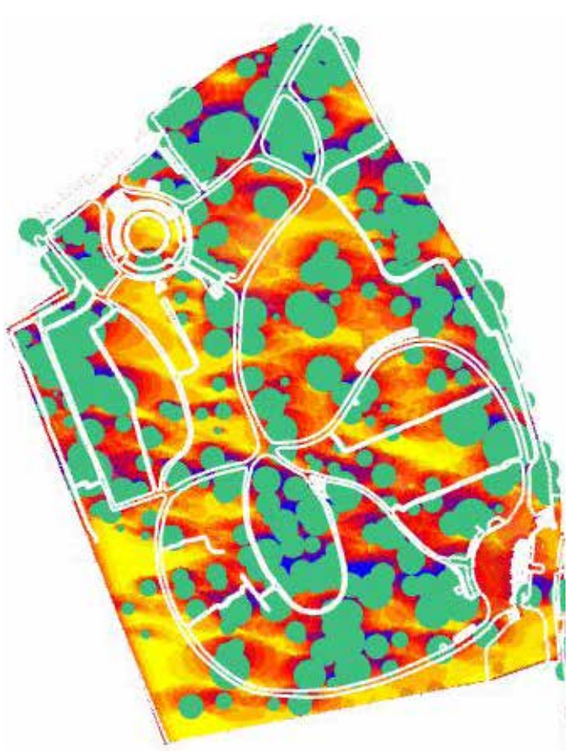
Sun studies of the West side of Highgate Cemetery show that, after the removal of diseased Ash trees, pockets of the site will received significantly more sunlight. While this presents an opportunity for growing new trees and understory, it also presents a challenge for managing some of the species on site such as bramble, as they will thrive in the new sunnier conditions.



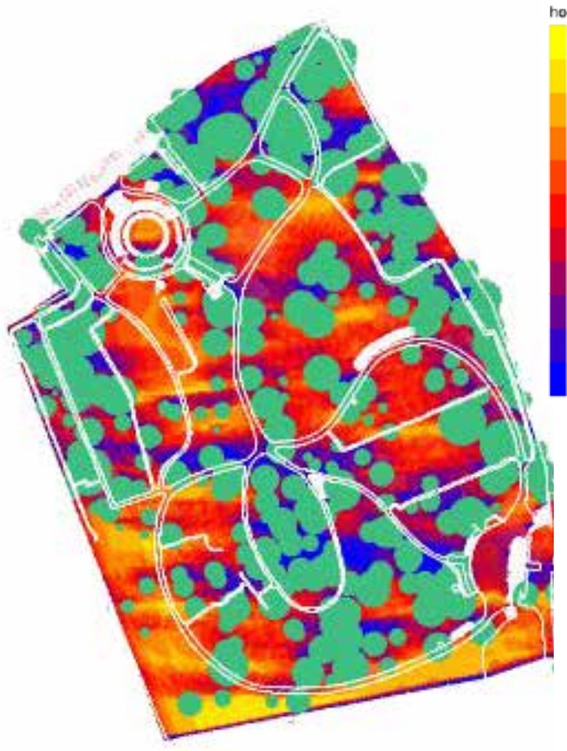
December



March



June



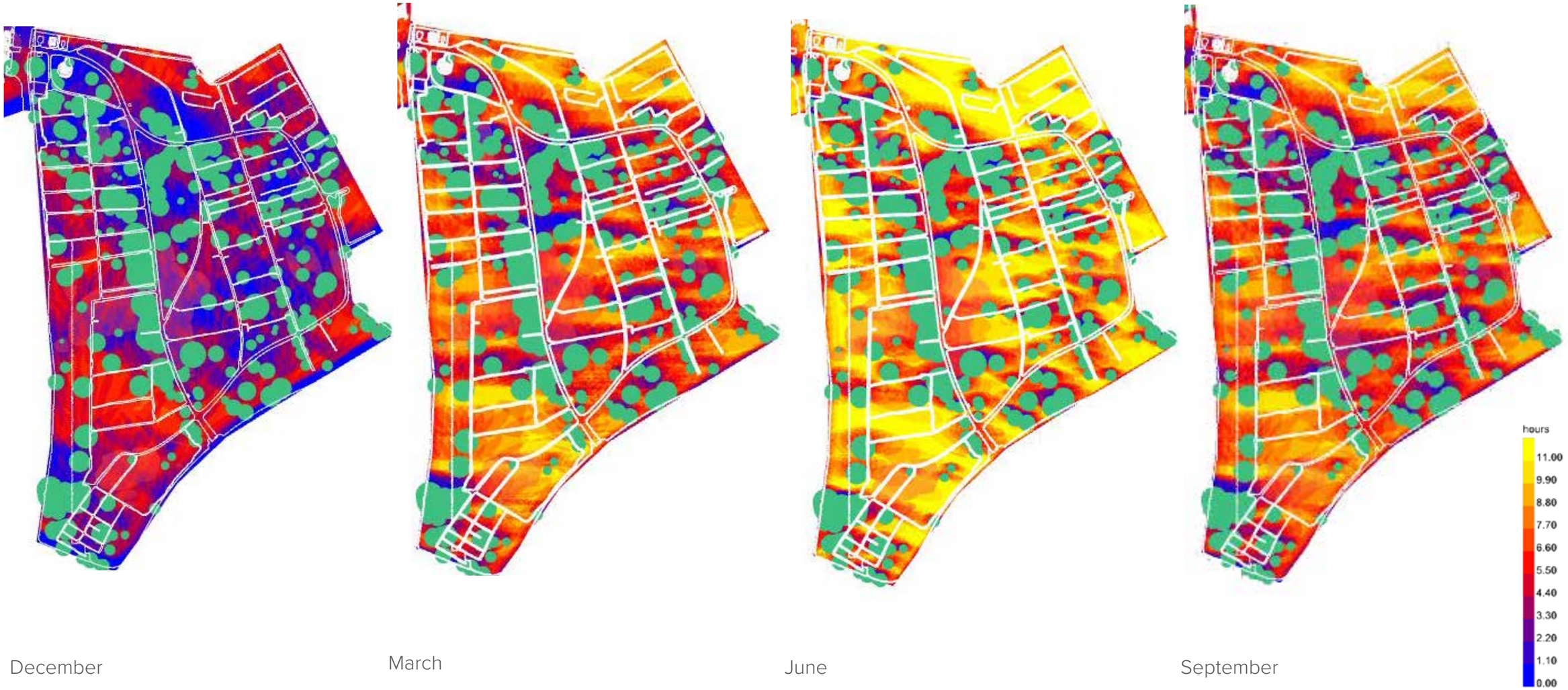
September

Sun Studies with A&B Trees

EAST SIDE

Gustafson Porter + Bowman

As with the West side, the removal of diseased Ash trees will open up much of the landscape to more sun. Historically, the East side was much more open than the West, so the new condition will be more representative of the historic layout. However, planting new trees and understory strategically will help maintain an open woodland condition and support the maintenance of aggressive species



December

March

June

September

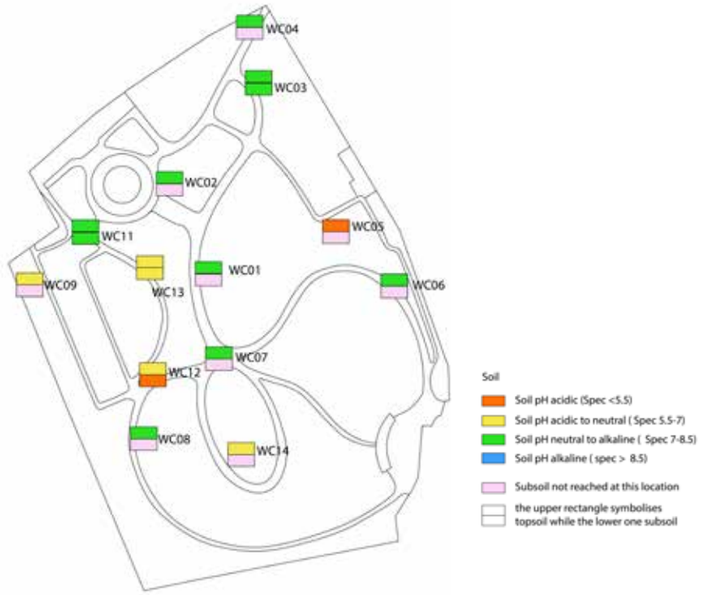
Soil Composition

WEST SIDE

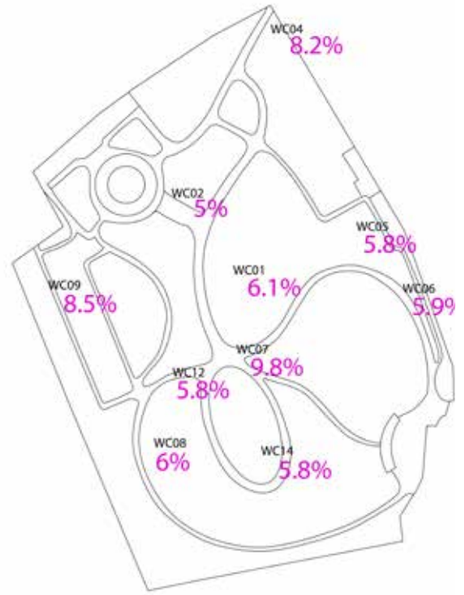
Gustafson Porter + Bowman

The soils on the West side of the Cemetery vary dramatically, particularly in pH and mineral compositions. The West side is split into sandy loams in the northern half, and trends towards heavier clay loams in the southern half. Rather than trying to standardise the soil profiles across the site for planting purposes, the planting schemes need to respond and work with the soil profile as it stands in any particular location.

Soil Composition

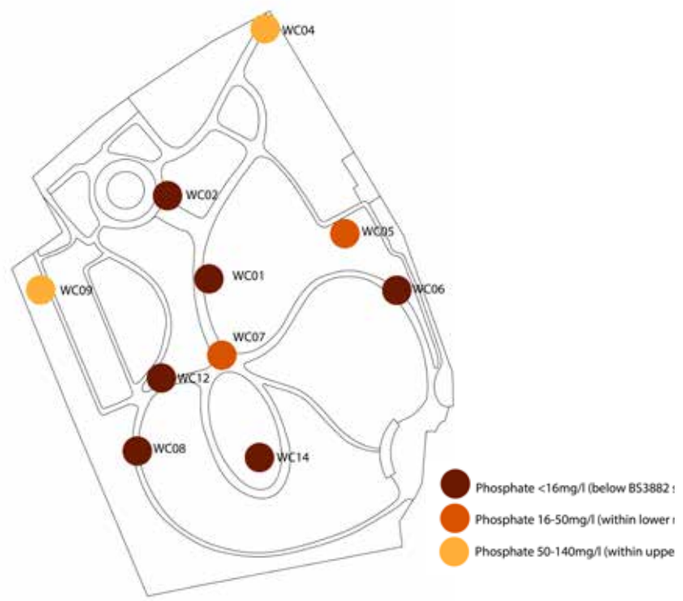


Soil pH

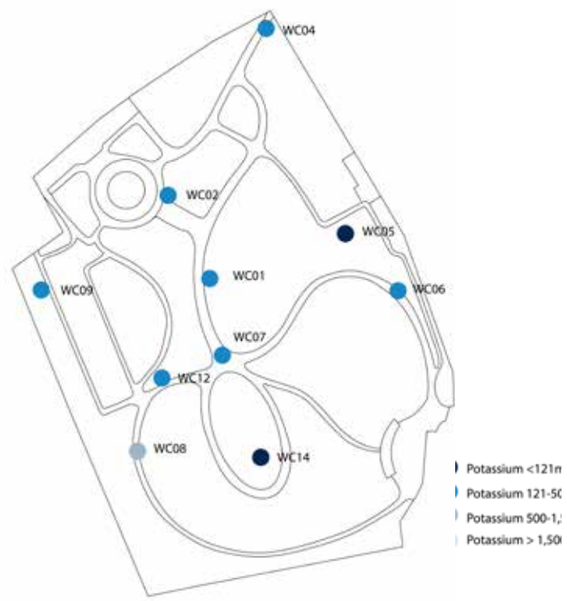


Soil Organic Matter

Soil Magnesium



Soil Phosphate



Soil Potassium

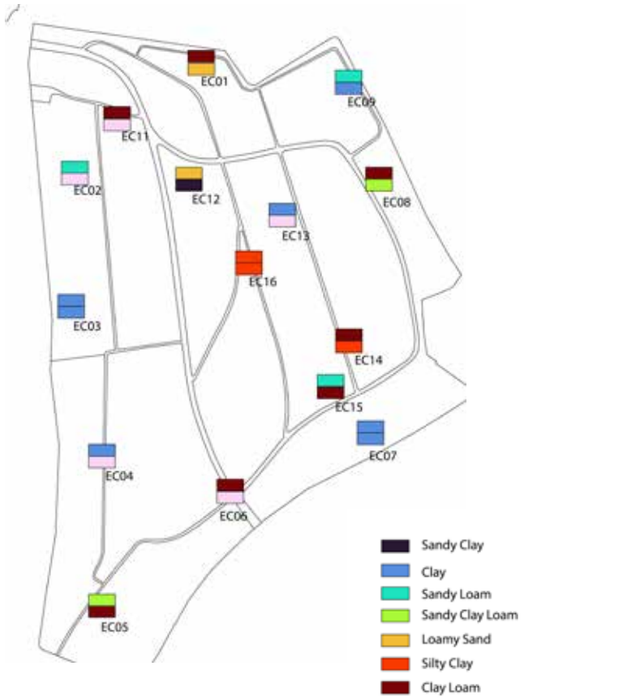
Soil Composition

EAST SIDE

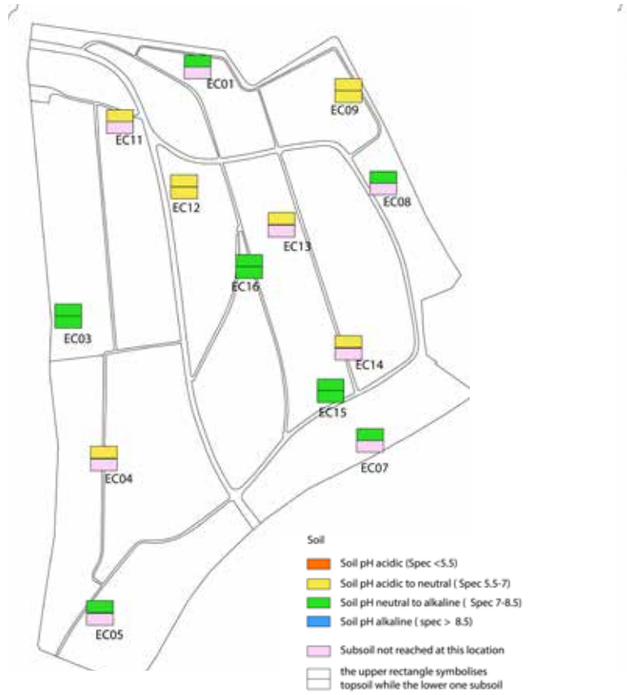
Gustafson Porter + Bowman

The East side also has a variety of different soils, allowing for a diversity of planting. Sandy loam has been recorded in the northeast of the cemetery, however the majority of this side is comprised of varying levels of clays. There are no acidic soils, organic matter is slightly higher on this side, and there are no high phosphate locations.

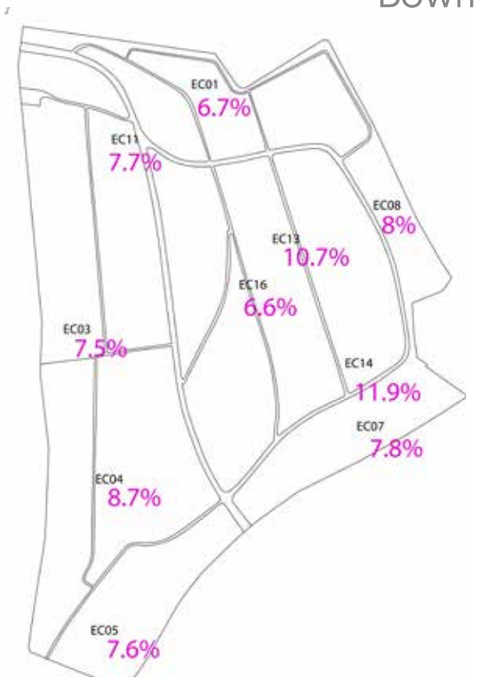
For both sides of the cemetery, additional soil studies for areas with gaps would be beneficial for further informing the planting scheme.



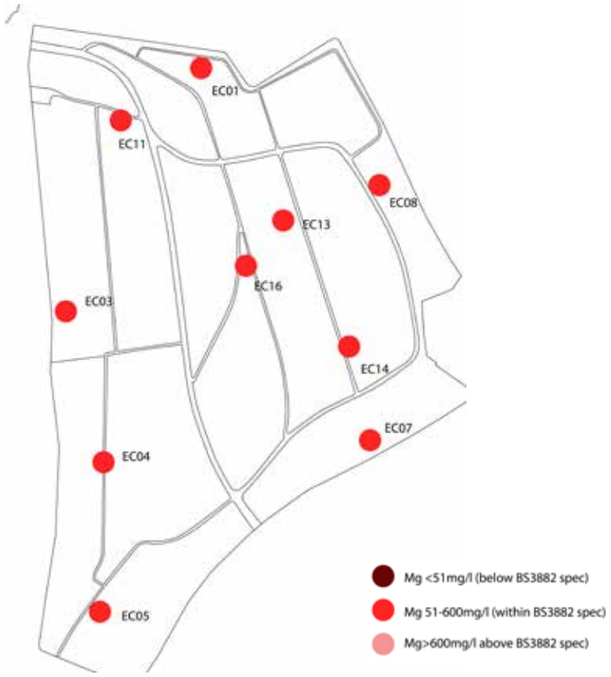
Soil Composition



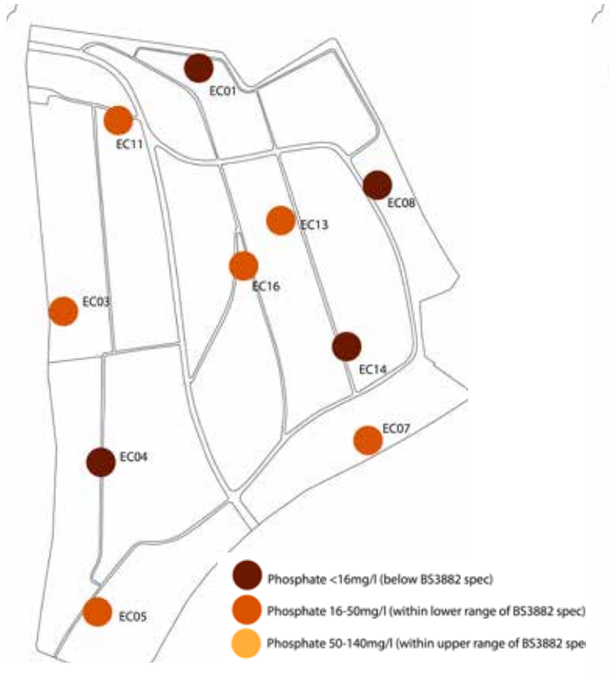
Soil pH



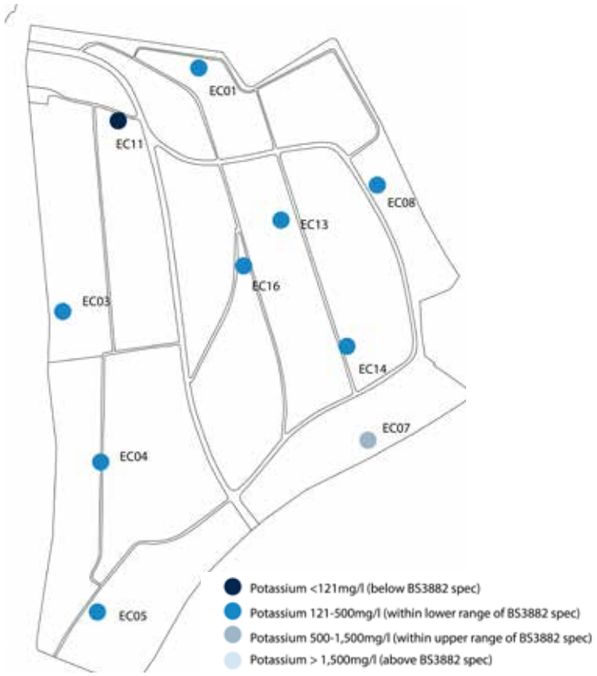
Soil Organic Matter



Soil Magnesium



Soil Phosphate



Soil Potassium

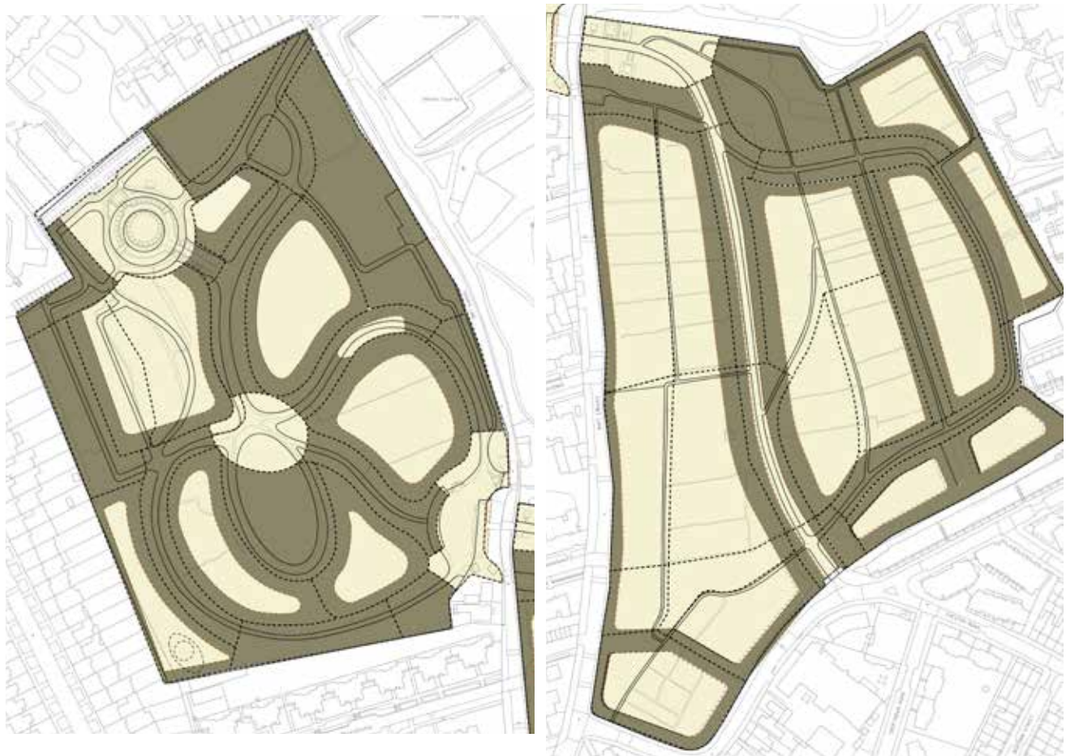
Sun/Shade Wet/Dry Soils

Gustafson Porter + Bowman

While detailed soil analysis provides information for specific planting, the starting point for the planting proposals was to layer the shade and light conditions with the gradient of dry to wet soils. This produced a series of conditions such as sun on light soils which will provide a base condition for choosing plants that will thrive in that environment.

The west side of the Cemetery has significantly more light soils, while the east side has most heavy clay soils; however it has more potential for sunny areas once the diseased Ash is removed.

Sun and Shade



Light/Shade conditions
(according to the proposed habitats - Stage 2)

- Light/Openess
- Shade/Closeness

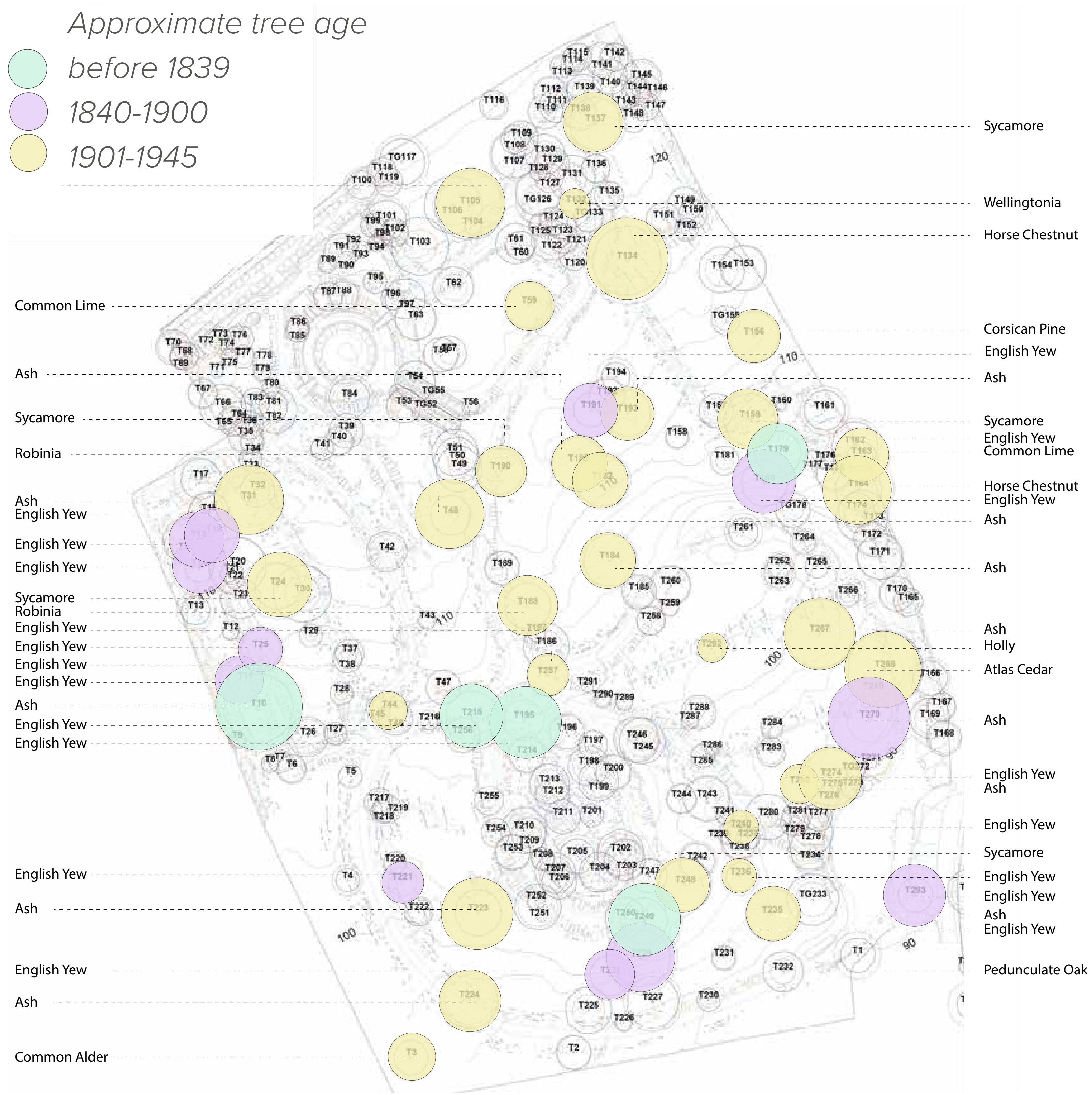
Wet and Dry Soils

- Light soils (high percentage of sand)
- Medium to heavy soils
- Heavy soils (high percentage of clay)
- Waterlogged/Flooded areas

Historic Trees

WEST SIDE

Gustafson Porter + Bowman



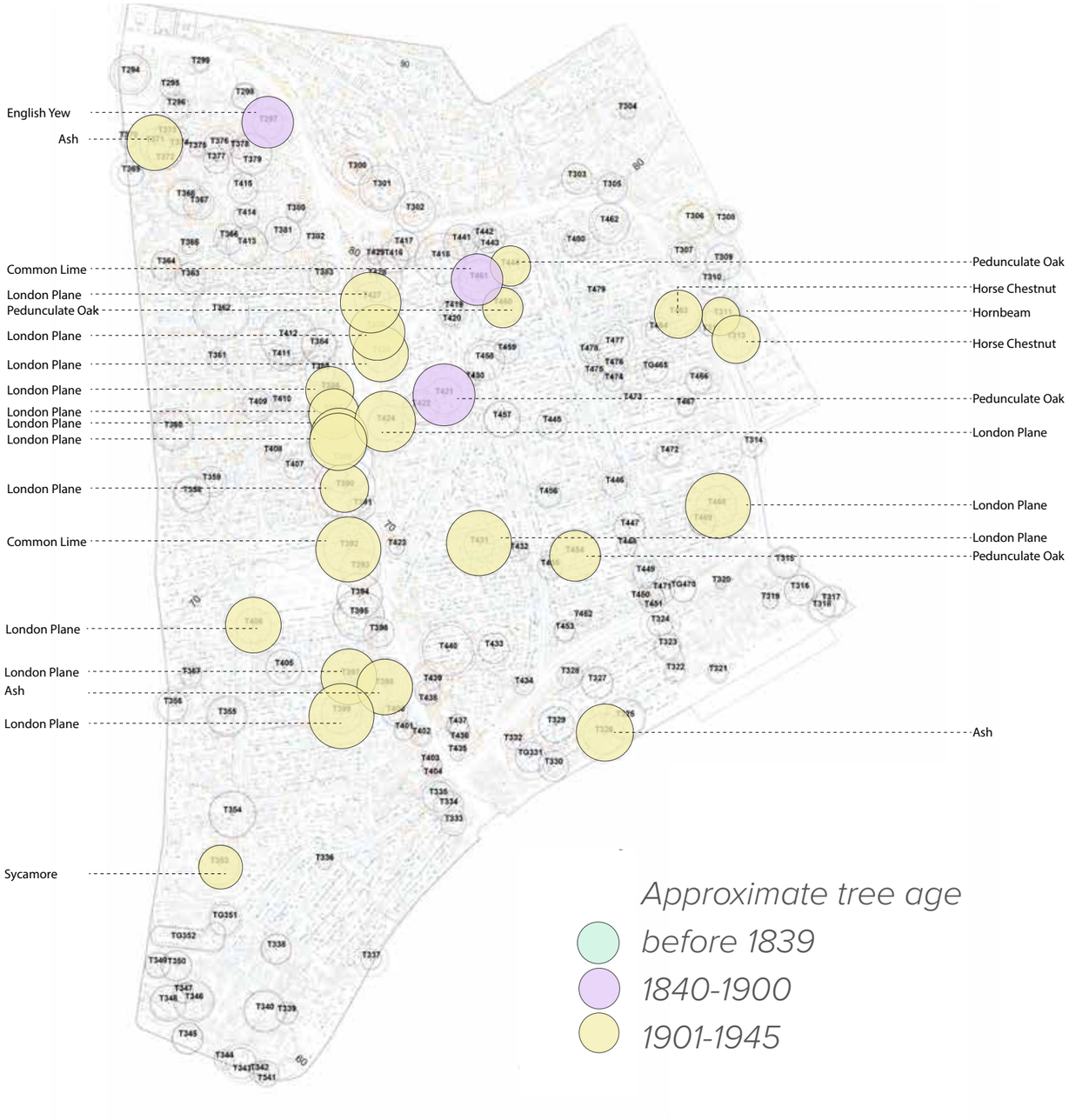
Tree Ref No.	Common name	Botanical name	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)	circumference (x3.142)	Roughly planted (annual girth growth 3cm)	Roughly planted (annual girth growth 2.75cm)	Roughly planted (annual girth growth 2.5cm)	Roughly planted (annual girth growth 2.cm)	Roughly planted (annual girth growth 1.5cm)
3	Common Alder	Alnus glutinosa	18	660	6	Mature	20+	B2	197.1 (7.9)	207				1919	
10	Ash	Fraxinus excelsior	22	1260	12	Mature	20+	B2	706.9 (15.0)	396		1879			
11	English Yew	Taxus baccata	14	370 630	6	Early-mature	20+	B2	243.0 (8.8)	198					1891
14	English Yew	Taxus baccata	13	820	5	Early-mature	20+	B2	304.2 (9.8)	257					1851
15	English Yew	Taxus baccata	13	830	5	Early-mature	20+	B2	311.7 (10.0)	261					1849
19	English Yew	Taxus baccata	14	460 590	8	Early-mature	20+	B2	254.0 (9.0)	185					1899
24	Sycamore	Acer pseudoplatanus	21	940	8	Early-mature	20+	B2	399.7 (11.3)	295		1916			
25	English Yew	Taxus baccata	15	600 270	7	Early-mature	20+	B2	196.0 (7.9)	188					1897
31	Ash	Fraxinus excelsior	22	780	12	Early-mature	20+	B2	275.2 (9.4)	245		1934			
44	English Yew	Taxus baccata	10	270 460	6	Semi-mature	20+	B2	33.0 (3.2)	144					1927
48	Robinia	Robinia pseudoacacia	25	980	7	Mature	20+	B2	434.5 (11.8)	308		1911			
59	Common Lime	Tilia x europaea	17	730	8	Early-mature	20+	B2	241.1 (8.8)	229		1940			
105	Ash	Fraxinus excelsior	22	910	12	Mature	20+	B2	374.6 (10.9)	286		1919			
132	Wellingtonia	Sequoiadendron giganteum	22	1090	5	Early-mature	20+	B2	537.5 (13.1)	342	1909				
134	Horse Chestnut	Aesculus hippocastanum	20	750 540 850	12	Mature	20+	B2	707.0 (15.0)	236		1937			
137	Sycamore	Acer pseudoplatanus	20	880	9	Early-mature	20+	B2	350.3 (10.6)	276		1923			
156	Corsican Pine	Pinus nigra	19	700	9	Mature	20+	B2	221.7 (8.4)	220		1943			
159	Sycamore	Acer pseudoplatanus	19	840	9	Mature	20+	B1	319.2 (10.1)	264		1927			
162	Sycamore	Acer pseudoplatanus	20	760	8	Early-mature	20+	B2	261.3 (9.1)	239		1936			
163	Common Lime	Tilia x europaea	20	800	5	Early-mature	20+	B2	289.5 (9.6)	251		1932			
164	Horse Chestnut	Aesculus hippocastanum	20	1020	8	Mature	20+	B2	470.7 (12.2)	320		1907			
179	English Yew	Taxus baccata	17	880	8	Mature	20+	B2	350.3 (10.6)	276					1839
180	English Yew	Taxus baccata	17	680 370 290	8	Mature	20+	B2	353.0 (10.6)	214					1881
182	Ash	Fraxinus excelsior	22	820	9	Mature	20+	B2	304.2 (9.8)	257		1929			
183	Ash	Fraxinus excelsior	22	810	9	Mature	20+	B2	296.8 (9.7)	254		1931			
184	Ash	Fraxinus excelsior	22	810	9	Mature	20+	B2	296.8 (9.7)	254		1931			
188	Robinia	Robinia pseudoacacia	19	840	8	Mature	20+	B2	319.2 (10.1)	264		1927			
190	Sycamore	Acer pseudoplatanus	18	740	8	Early-mature	20+	B2	247.7 (8.9)	232		1939			
191	English Yew	Taxus baccata	12	780	6	Early-mature	20+	B2	275.2 (9.4)	245					1860
193	Ash	Fraxinus excelsior	18	760	8	Mature	20+	B2	261.3 (9.1)	239		1936			
195	English Yew	Taxus baccata	15	1040	7	Mature	40+	A1	489.3 (12.5)	327					1805
215	English Yew	Taxus baccata	16	960	9	Mature	40+	A2	416.9 (11.5)	301					1822
221	English Yew	Taxus baccata	16	600	5	Early-mature	40+	A2	162.9 (7.2)	188					1897
223	Ash	Fraxinus excelsior	18	1000	8	Mature	20+	B2	452.4 (12.0)	314		1909			
224	Ash	Fraxinus excelsior	22	720	10	Mature	20+	B2	234.5 (8.6)	226		1941			
228	English Yew	Taxus baccata	14	730	7	Early-mature	20+	B2	241.1 (8.8)	229					1870
229	Pedunculate Oak	Quercus robur	22	1030	10	Early-mature	20+	B2	479.9 (12.4)	323			1894		
235	Ash	Fraxinus excelsior	20	760	9	Mature	20+	B2	261.3 (9.1)	239		1936			
236	English Yew	Taxus baccata	10	420 320	5	Early-mature	20+	B2	125.0 (6.3)	132					1935
240	Holly	Ilex aquifolium	16	380	6	Mature	20+	B2	65.3 (4.6)	119					1943
248	Sycamore	Acer pseudoplatanus	20	760	9	Mature	20+	B2	261.3 (9.1)	239		1936			
249	English Yew	Taxus baccata	7	1090	8	Mature	20+	B2	537.5 (13.1)	342					1795
257	English Yew	Taxus baccata	12	600	7	Early-mature	20+	B2	162.9 (7.2)	188					1897
267	Ash	Fraxinus excelsior	22	990	12	Mature	20+	B2	443.4 (11.9)	311		1910			
268	Atlas Cedar	Cedrus atlantica	16	1110	13	Mature	20+	B1	557.4 (13.3)	349	1907				
270	Ash	Fraxinus excelsior	24	1170	8	Mature	40+	A1	619.3 (14.0)	367		1889			
274	Ash	Fraxinus excelsior	23	910	10	Mature	20+	B1	374.6 (10.9)	286		1919			
282	English Yew	Taxus baccata	13	570	6	Semi-mature	40+	A1	147.0 (6.8)	179					1904
292	Holly	Ilex aquifolium	12	400	4	Mature	20+	B2	72.4 (4.8)	126					1939
293	English Yew	Taxus baccata	14	810	6	Early-mature	20+	B1	296.8 (9.7)	254					1853

Approximate tree age based on the annual girth growth per tree species - ‘Mitchell’s Rule’ , West side

Historic Trees

EAST SIDE

Gustafson Porter + Bowman



Tree Ref No.	Common name	Botanical name	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radiusm)	circumference (x3.142)	Roughly planted (annual girth growth 3cm)	Roughly planted (annual girth growth 2.75cm)	Roughly planted (annual girth growth 2.5cm)	Roughly planted (annual girth growth 2.cm)	Roughly planted (annual girth growth 1.5cm)
297	English Yew	Taxus baccata	11	760 310 310	6	Early-mature	20+	B1	346.0 (10.5)	239					1864
311	Hornbeam	Carpinus betulus	14	656	7	Early-mature	20+	B2	194.7 (7.9)	206				1920	
313	Horse Chestnut	Aesculus hippocastanum	12	800	7	Early-mature	20+	B1	289.5 (9.6)	251		1932			
326	Ash	Fraxinus excelsior	20	935	8	Mature	20+	B2	395.5 (11.2)	294		1916			
353	Sycamore	Acer pseudoplatanus	16	640	8	Early-mature	40+	A1	185.3 (7.7)	201		1950			
371	Ash	Fraxinus excelsior	19	640 680	6	Semi-mature	20+	B2	394.0 (11.2)	214		1945			
386	London Plane	Platanus x hispanica	7	715	1.5	Semi-mature	20+	B2	231.3 (8.6)	225		1941			
387	London Plane	Platanus x hispanica	22	870	10	Early-mature	20+	B2	342.4 (10.4)	273		1924			
388	London Plane	Platanus x hispanica	22	775	12	Early-mature	20+	B2	271.7 (9.3)	243		1935			
389	London Plane	Platanus x hispanica	22	1060	12	Early-mature	20+	B2	508.3 (12.7)	333		1902			
390	London Plane	Platanus x hispanica	22	770	12	Early-mature	20+	B2	268.2 (9.2)	242		1935			
392	Common Lime	Tilia x europaea	22	1065	10	Early-mature	20+	B2	513.1 (12.8)	334		1901			
397	London Plane	Platanus x hispanica	8	910	2	Early-mature	20+	B2	374.6 (10.9)	286		1919			
398	Ash	Fraxinus excelsior	18	770	11	Early-mature	20+	B2	268.2 (9.2)	242		1935			
399	London Plane	Platanus x hispanica	17	1020	8	Early-mature	20+	B2	470.7 (12.2)	320		1907			
406	London Plane	Platanus x hispanica	20	970	7	Early-mature	20+	B2	425.7 (11.6)	305		1912			
421	Pedunculate Oak	Quercus robur	19	1020	7	Early-mature	20+	B2	470.7 (12.2)	320			1895		
424	London Plane	Platanus x hispanica	19	1010	7	Early-mature	20+	B2	461.5 (12.1)	317		1908			
425	London Plane	Platanus x hispanica	19	935	7	Early-mature	20+	B2	395.5 (11.2)	294		1916			
426	London Plane	Platanus x hispanica	19	815	7	Early-mature	20+	B2	300.5 (9.8)	256		1930			
427	London Plane	Platanus x hispanica	19	1000	7	Early-mature	20+	B2	452.4 (12.0)	314		1909			
431	London Plane	Platanus x hispanica	19	1050	6	Early-mature	20+	B2	498.8 (12.6)	330		1903			
444	Pedunculate Oak	Quercus robur	18	660	6	Early-mature	20+	B2	197.1 (7.9)	207			1940		
454	Pedunculate Oak	Quercus robur	20	735	10	Early-mature	20+	B2	244.4 (8.8)	231			1931		
460	Pedunculate Oak	Quercus robur	20	670	7	Early-mature	20+	B2	203.1 (8.0)	210			1939		
461	Pedunculate Oak	Quercus robur	21	865	8	Early-mature	20+	B2	338.5 (10.4)	272			1914		
463	Horse Chestnut	Aesculus hippocastanum	15	800	8	Early-mature	20+	B2	289.5 (9.6)	251		1932			
468	London Plane	Platanus x hispanica	15	1070	8	Early-mature	20+	B2	517.9 (12.8)	336		1901			

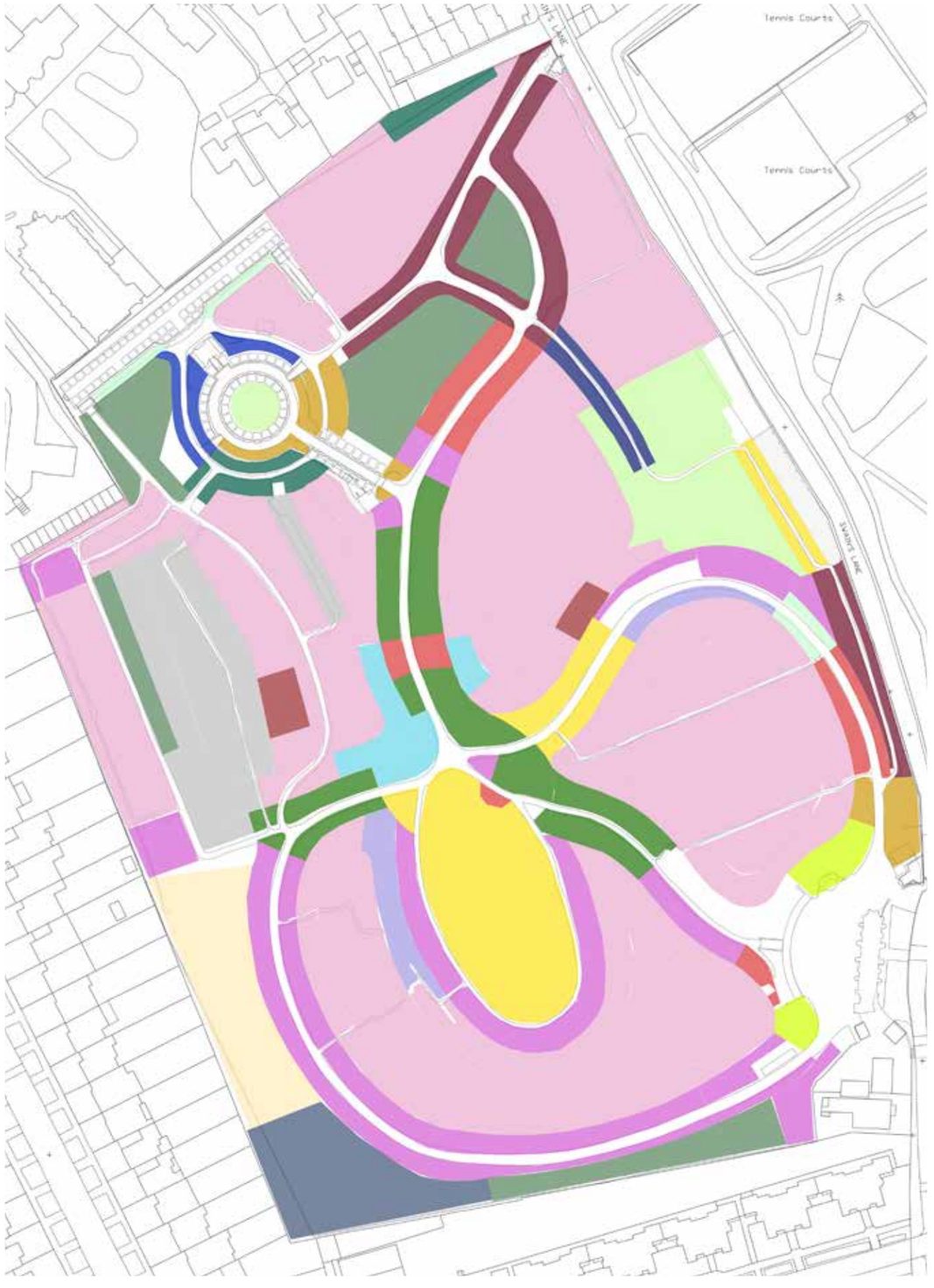
Approximate tree age based on the annual girth growth per tree species - ‘Mitchell’s Rule’ , East side

Existing Ground Cover Site Survey - Winter 2023-24

WEST SIDE

Gustafson Porter + Bowman

The Cemetery was studied for its ground cover composition in order to propose planting that aligns with the existing conditions. The planting following the primary paths varies along the route and includes snowberry(*Symphoricarpos)*, *geraniums spp.*, wildflowers, three cornered garlic (*Allium triquetrum*), and bare ground. As one moves further away from the paths and into the site, much of the west side is covered with bramble (*Rubus spp.*), ivy(*Hedera*), and other ruderal species. There are also areas dominated by species such as *acuba* and *cotoneaster*, and ferns dominate in other areas. In the bottom west corner where there is a small spring, the vegetation primarily consists of horsetail (*Equisetum*) and *Iris* spp.



Key

- Ivy
- Horsetail & Iris pseudacorus
- Ivy, Bramble and Ruderals
- Bramble
- Tall Ruderals
- Bare ground
- Wildflowers/Grassland
- Amenity Lawn
- Pteridium aquilinum (bracken)
- Ferns
- Hypericum and Dryopteris
- Ornamental species
- Rich diversity with bare patches
- Areas with limited vegetation
- Site clearance(understory)
- Introduced plants from grave owners
- Aucuba, Snowberry, Cotoneaster, Horsetail, Bramble
- Three cornered garlic
- Snowberry and Other Ruderals

Existing Ground Cover Site Survey

EAST SIDE

Gustafson Porter + Bowman

The East side also has a significant percentage of bramble (*Rubus spp.*), and ivy (*Hedera*) composing its groundcover, however it appears to be more patchy, with less structure following the main paths. There are also large areas of amenity and grassland, areas that have been cleared, in additional to a significant patch of land with introduced plants from grave owners from near the Swains Lane Entrance.

Key

- Ivy
- Ivy, Bramble and Ruderals
- Bramble
- Tall Ruderals
- Wildflowers/Grassland
- Amenity Lawn
- Couch grass, ruderals & ramble
- Pteridium aquilinum (bracken)
- Ferns
- Hypericum and Dryopteris
- Ornamental
- Horsetail and Ruderals
- Horsetail
- Site clearance (understory)
- Introduced plants from grave owners
- Couch grasses, Green Alkanet and Cow Parley
- Three cornered garlic
- Ivy, Bramble, Ruderals and Horsetail
- Sedges and Iris foetidissima

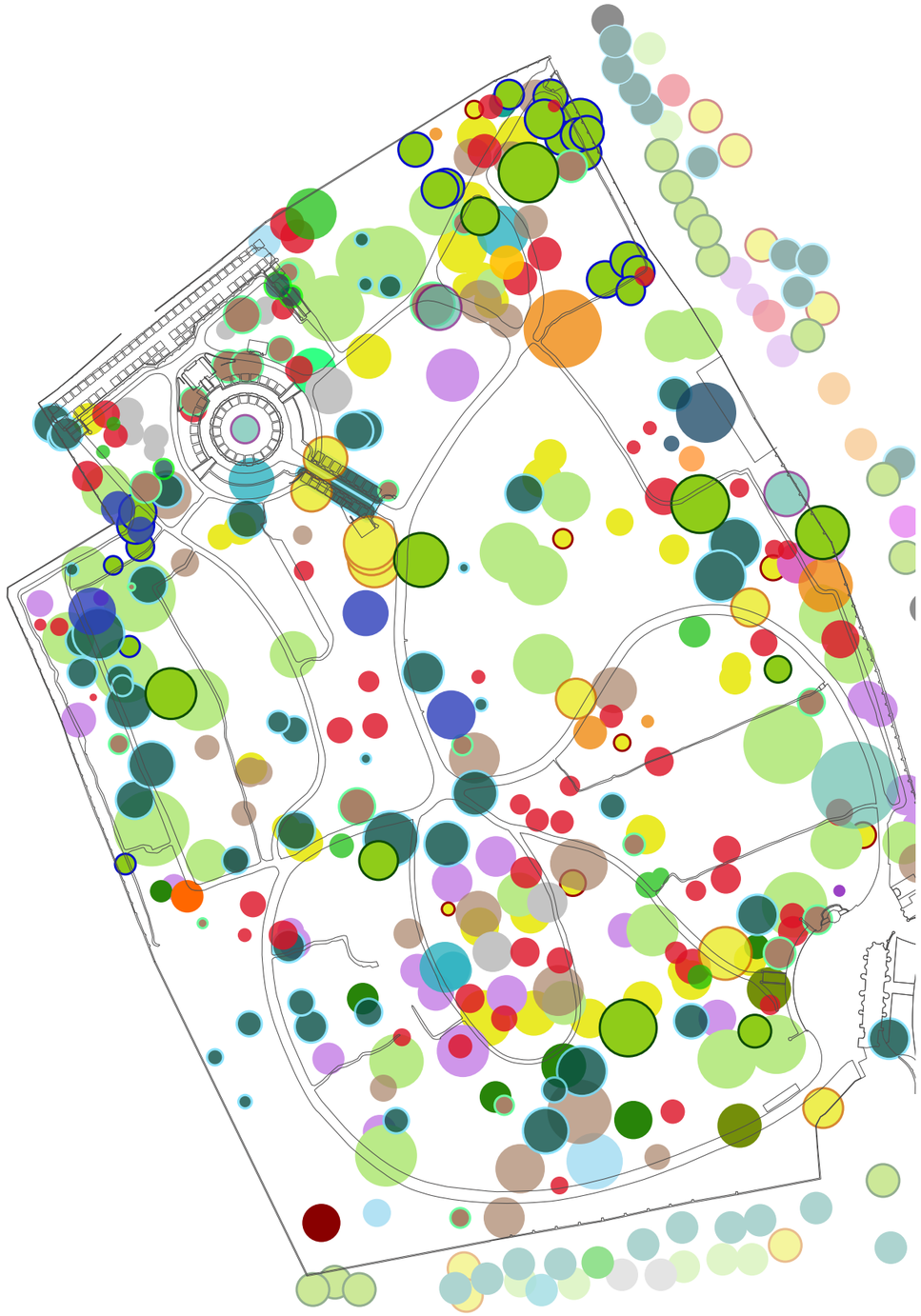
On the East Cemetery the verges of the secondary and tertiary paths are dominated by Cow Parsley (December)

Existing Category A&B Tree Species

WEST SIDE

Gustafson Porter + Bowman

Across both sides, there are about 40 tree species that make up the Category A&B trees and Young Trees with a Future, which will remain post ash removal. The distribution is approximately 50/50 native/non native. There are several large Ash trees that will remain and seem less susceptible to the disease, in addition to oak(*Quercus*), holly(*Ilex),* spruce(*Picea*), cedar (*Cedrus)*, cherry (*Prunus)*, maple *(Acer),* sycamore *(Acer pseudoplatanus)*, and more.



Native

- Field Maple (Acer campestre)
- Common Alder (Alnus glutinosa)
- Silver Birch (Betula pendula)
- Hornbeam (Carpinus betulus)
- Dogwood (Cornus spp.)
- Common Hazel (Corylus avellana)
- Hawthorn (Crataegus monogyna)
- Common Beech (Fagus sylvatica)
- Ash (Fraxinus excelsior)
- Holly (Ilex aquifolium)
- Apple (Malus spp.)
- Wild Cherry (Prunus avium)
- Bird Cherry (Prunus padus)
- Pedunculate Oak (Quercus rober)
- Willow (Salix spp.)
- Whitebeam (Sorbus aria)
- Mountain Ash (Sorbus aucuparia)
- Yew (Taxus baccata)
- Common Lime (Tilia x europaea)
- English Elm (Ulmus procera)

Non-native

- Norway Maple (Acer platanoides)
- Sycamore (Acer pseudoplatanus)
- Horse Chestnut (Aesculus hippocastanum)
- Atlas Cedar (Cedrus atlantica)
- Cedar of Lebanon (Cedrus libani)
- Lawson Cypress (Chamaecyparis lawsoniana)
- Bay (Laurus nobilis)
- Magnolia (Magnolia spp.)
- Norway Spruce (Picea abies)
- Corsican Pine (Pinus nigra)
- London Plane (Platanus x acerifolia)
- Pissards Plum (Prunus cerasifera 'Pissardii')
- Cherry Laurel (Prunus laurocerasus)
- Tibetan Cherry Prunus serrula)
- Black Locust (Robinia pseudoacacia)
- Wellingtonia/Giant Sequoia (Sequoiadendron giganteum)
- Irish Yew Taxus baccata 'Fastigiata')
- Mongolian Lime (Tilia mongolica)

Naturalised

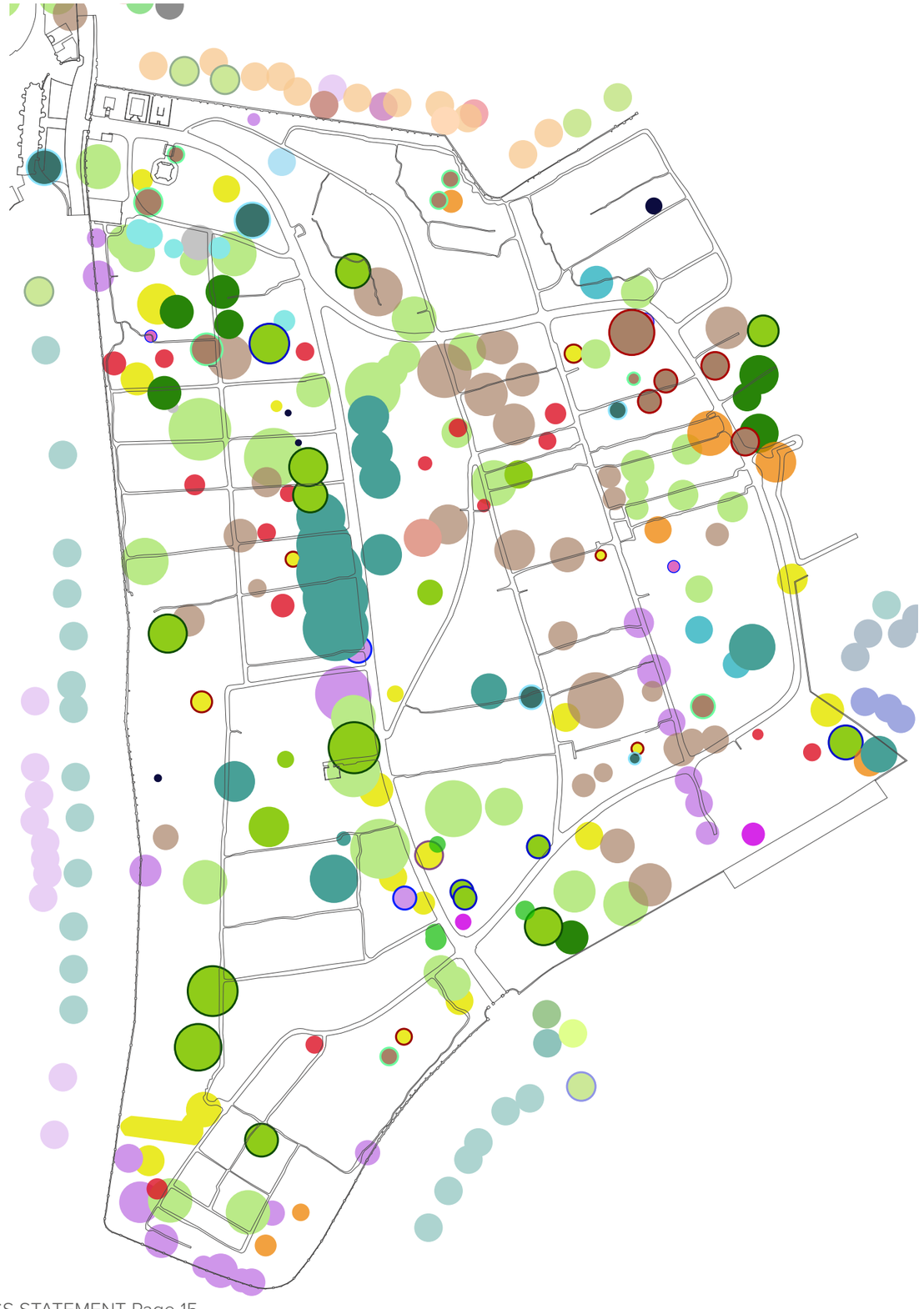
- Sweet Chestnut (Castanea sativa)
- Turkey Oak (Quercus cerris)
- Holm Oak (Quercus ilex)

Existing Category A&B Tree Species

EAST SIDE

Gustafson Porter + Bowman

The East side includes much of the same species, with some defining clusters such as a the lime (*Tilia)* avenue, groups of Oaks (*Quercus*), and Plane(*Platanus x hispanica)* trees lining the primary path to the Chester Road Gate. There is marginally less diversity of species on the East as compared with the West



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Young Trees with a Future

WEST SIDE

Gustafson Porter + Bowman

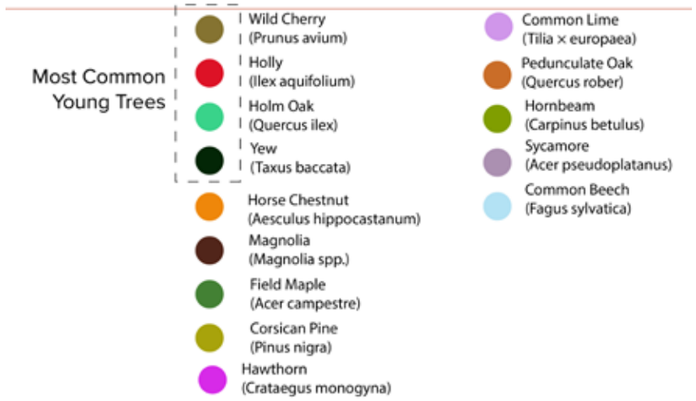
There is a number of ‘Young Trees with a Future’ that were surveyed as part of the tree survey. They are young trees predicted to thrive and so should be retained and accounted for. The diagram shows the Category A&B trees in dark green, with trees with a future with a coloured dot. The green around the coloured dot shows the projected canopy size at maturity. The small light green dots show all trees other than the category A & B, which are assumed to be majority ash or category C unsurveyed trees.

Young Trees with a Future

EAST SIDE

Gustafson Porter + Bowman

There are fewer ‘Young Trees with a Future’ in the East side, with holly *(Ilex)* and holm oak *(Quercus Ilex)* being the most common. There is also one notable young beech tree



Openings and Clusters

WEST SIDE

Gustafson Porter + Bowman

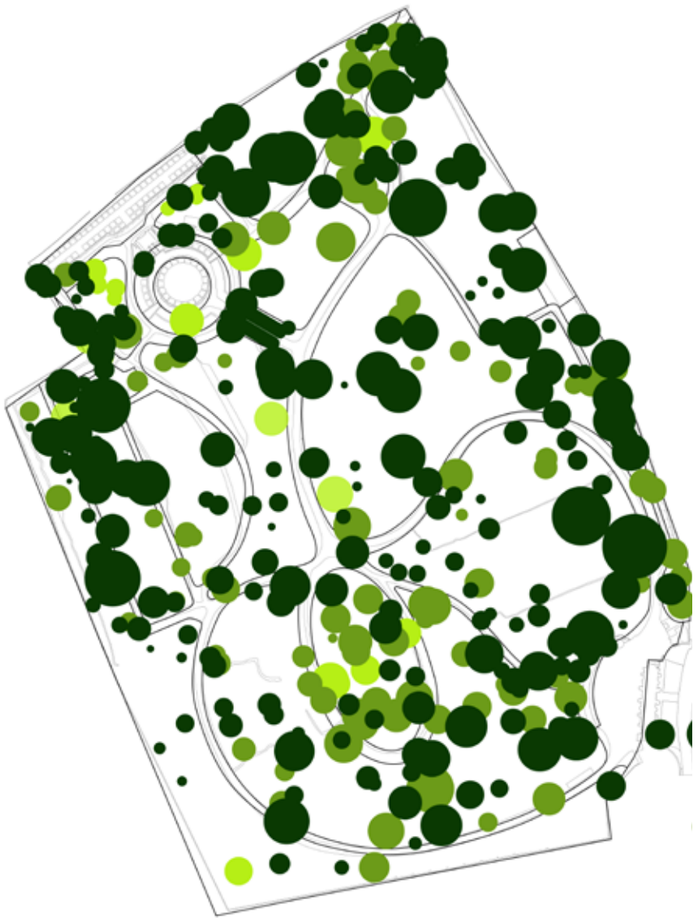
Further desk and site study of the Cemetery looked at openings and density of the canopy, as well as clusters of non-Category A&B trees, in order to better understand the extent that light will reach the understory after the removal of Ash and to note clusters of Category C trees that were seen on site. On the west side in particular, there are large clusters of species such as laurel(*Prunus laurocerasus*), yew(*Taxus baccata*), hazel(*Corylus avellana*), and holly(*Ilex aquifolium*) that have not been surveyed.

Woodland areas and clearings

Woodland

Woodland clearings

Tree crown typologies



dense crown

moderately dense crown

open crown

Clusters of small trees and understory openings **not** on Category A&B Tree Survey

understory opening

taxus (yew) cluster

betula (birch) cluster

corylus (hazel) cluster

prunus laurocerasus (cherry laurel) cluster

ilex (holly) cluster

tilia (lime) cluster

Openings and Clusters

EAST SIDE

Gustafson Porter + Bowman

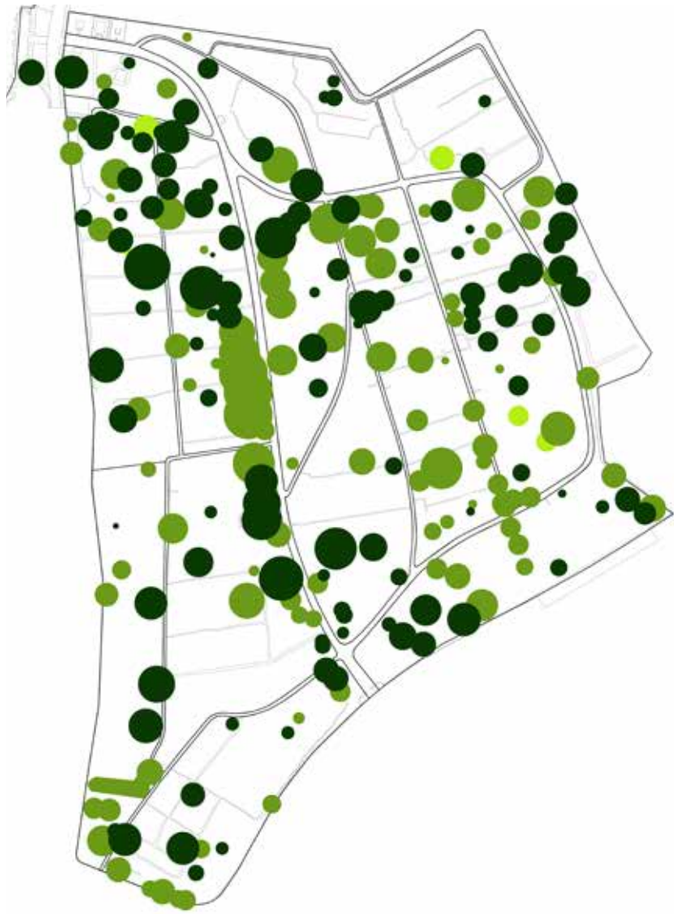
The east side currently is much more open; it has significantly more clearings as well as fewer clusters of unsurveyed trees. There are also fewer Category A & B species with ‘dense crowns’ which will further allow light in.

Woodland areas and clearings

Woodland

Woodland clearings

Tree crown typologies

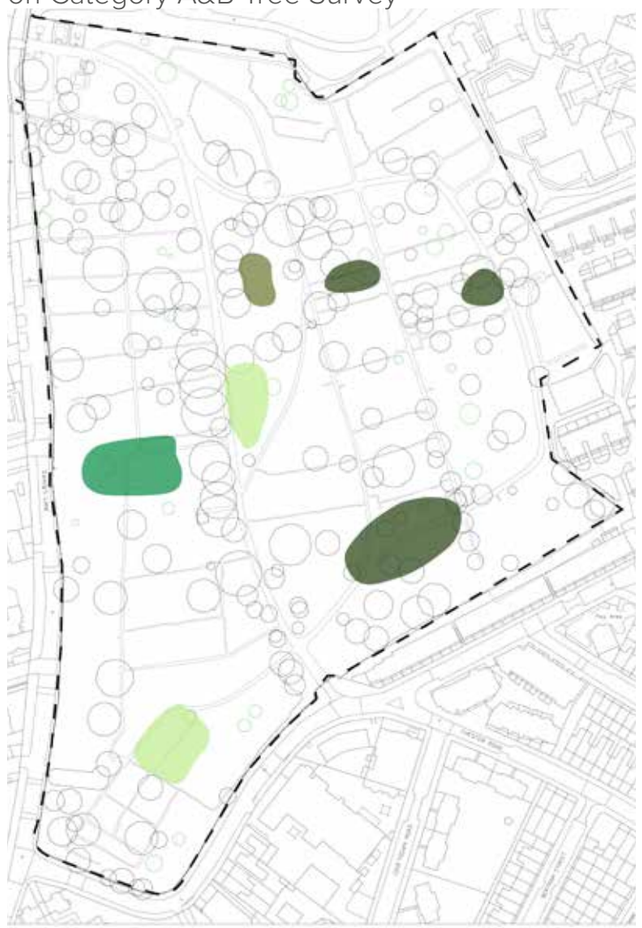


dense crown

moderately dense crown

open crown

Clusters of small trees and understory openings **not** on Category A&B Tree Survey



understory opening

taxus (yew) cluster

betula (birch) cluster

corylus (hazel) cluster

prunus laurocerasus (cherry laurel) cluster

ilex (holly) cluster

tilia (lime) cluster

Monuments

LISTED MONUMENTS AND SIGNIFICANT POINTS ON SITE

Gustafson Porter + Bowman

The diagrams to the right show the distribution of significant monuments across the site, in addition to monuments of landscape significance, as identified by GP+B.

This analysis forms the starting point for establishing an extended list of significant monuments beyond those that are listed, which in turn may inform the approach to repairing monuments in the future.

West Cemetery

East Cemetery

KEY

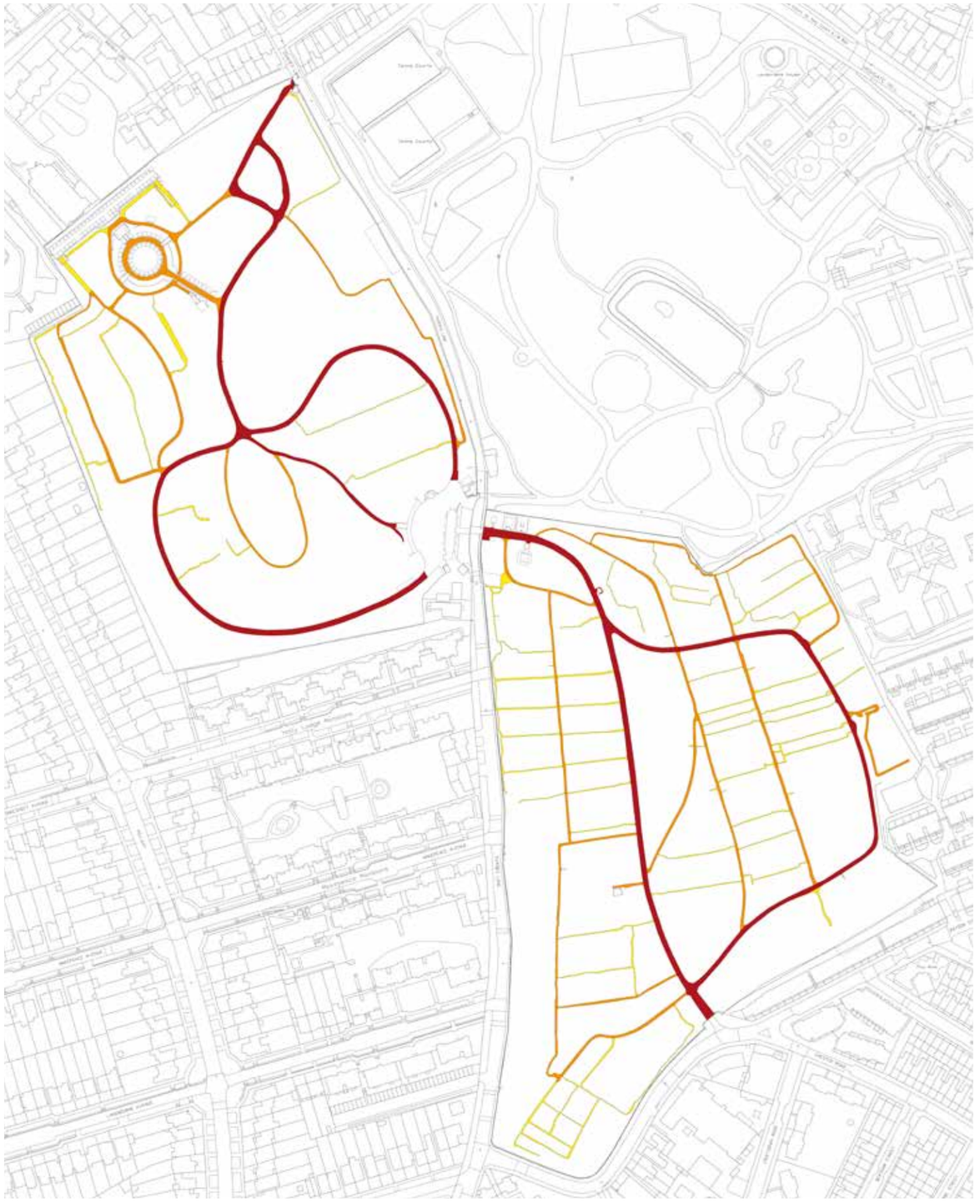
- Listed, Grade 1
- Listed, Grade 2*
- Listed, Grade 2
- Monuments of landscape significance
- Monuments on visitor leaflets
- Monuments on visitor leaflets and in the companion guide
- Orientation monuments on visitor leaflets

Existing Path Uses

PATH HIERARCHY AND USES

Gustafson Porter + Bowman

The path network at Highgate Cemetery broadly fits into a hierarchy of primary, secondary, and tertiary routes. These paths have different requirements, both in terms of the types of users, and the frequency of use. The proposals will need to consider these requirements carefully when proposing new finishes and build-ups.



KEY

Primary Paths

Frequent use by landscape maintenance vehicles:

- Kawasaki Mule
- J. Deere
- Skip Loader
- Kubatot Digger
- Club Car
- Chipper
- Forklift
- Trailer

Weekly use by hearse for funerals

Occasional use by larger vehicles:

- 36m Mobile Elevated Work Platform (MEWP) for arboricultural works
- 18 ton vehicles for film crews

Regular use by pedestrians

Secondary Paths

Occasional use my most landscape maintenance vehicles

Regular use by pedestrians

Tertiary Paths

Occasional use by some landscape maintenance vehicles

Occasional use by pedestrians based on recent burials or significant monuments

N

0m 25 50 75 100

Existing Path Materials

EXISTING PAVING MATERIALS

Gustafson Porter + Bowman

The West Cemetery contains a wide variety of hard landscape surface and edge treatments. Asphalt with buff aggregates forms the main material for the majority of the primary routes. Secondary and tertiary paths feature a wide variety of loose and bound aggregates, with some informal lawn paths. The courtyard between the chapel and colonnade features concrete paving stones which are arranged to resemble granite setts. Other smaller areas contain natural stone paving. The terrace catacomb roof is treated with asphalt. Concrete kerbs, timber edging, granite sett bands, and steel edges are used in various locations.

West Cemetery

KEY

Asphalt*

Sandstone paving

Informal lawn path

Asphalt with buff aggregates

Buff flint pea gravel

50mm concrete kerb

Concrete sett paving*

Grey granite loose gravel

Timber edging

Granite sett band

Concrete sett paving - fan arrangement*

Crushed brick mixed gravel

Steel edge

Red granite sett paving

Self-binding gravel

0m 25 50 75 100

N

Existing Path Materials

EXISTING EDGE AND KERBS CONDITIONS

Gustafson Porter + Bowman

The East Cemetery contains a slightly more restricted range of materials in comparison to the West. Asphalt is used on the main vehicular routes, with a combination of granite and concrete kerbs. The secondary and tertiary paths feature various types of loose aggregates, with some limited use of resin-bound gravel. Many of the tertiary paths have little or no treatment, leaving an informal lawn path. The new burial area in the East of the cemetery features an insitu concrete path. Reclaimed granite kerbs and concrete pin kerbs are used on the primary paths, but most other paths have no edging.

East Cemetery

KEY

Asphalt

Informal lawn path

Resin bound gravel

Insitu concrete

300mm granite kerb

Buff flint pea gravel

50mm Concrete kerb

Grey granite loose gravel

Crushed brick mixed gravel

0m 25 50 75 100

N

7.2 Fine Exposed Aggregate Concrete

PARIS SPECIFICATION

Gustafson Porter + Bowman

Cemex Specification. (translation from French)

To guarantee obtaining an aesthetic flooring, renowned for its quality and longevity, the specification consists of a fiber-reinforced concrete with a micro-deactivated finish on the surface of the Nuantis® Mineral type. In addition, in case of high heat, Nuantis® Mineral helps reduce the heat island effect and thus contributes to summer comfort. The following choices were made to produce the Nuantis®Mineral concrete floor covering with the following formulation:

BPS NF EN 206 C25/30 XF2 S3 Dmax 10 CL 0.40 microdeactivated with a grey cement base in inverted G/S with sand from the CEMEX Bouafles quarry and 6/10 FRECUL gravel or equivalent (text to be adapted to London's context).

In order to guarantee the best possible environmental management on site and to reduce the effects of site activity on the environment, the choice will be made to work with concrete from an ISO 14001 certified Production Unit.

Technical characteristics :

The concrete must comply with standard NF EN 206/CN

The concrete must comply with exposure class XF2

The consistency of the concrete arriving on site must be of S3 consistency.

The concrete must comply with the common strength classes C25/30.

The sand must come from the CEMEX Bouafles quarry (text to be adapted to London's context).

The aggregates must come from the FRECUL quarry with a granulometry of 6/10mm (text to be adapted to London's context).

The formulation of the concrete must integrate the addition of cellulosic fibers with a view to respecting the environment and future recycling.

Precautions for use:

The support will be sized according to the traffic and the corresponding loads, but at least PF2 bearing capacity (SETRA classification).

The thickness of the concrete will comply with DTU 13.3 Paving, i.e. a minimum of 12 cm.

The concrete will be placed with a ruler, then finished with a trowel. The deactivating product adapted to the grain size will be sprayed on the fresh concrete using a round head sprayer. After hardening, the concrete slab will be washed with a high pressure cleaner of at least 150 bars in order to strip the gravel.

The splitting joints will be made according to the rules of the art, in accordance with DTU 13.3 Paving, i.e. a maximum spacing of 5m in all directions, a maximum length ≤ 1.5 times the width and a transverse length of the panel ≤ 7m.

The joints can be made by sawing the concrete, by laying lost joints or by layout.

Depending on the accessibility of the site, and in order to facilitate the placement of the concrete on the latter, a pumpable formula can be provided.

The addition of water or other products on site is strictly prohibited.

The site must be protected from any intrusion during and after pouring.

Exposed to bad weather, decorative concrete structures require protection and maintenance to maintain their aesthetic quality over time. Protective products (film-forming or impregnating resins) offer resistance to abrasion, UV and weathering. These products are applied by spraying or roller a few weeks after the end of the casting. Different aspects are possible: matte, satin or wet look.

The concrete must be applied by a specialized applicator from the Experensol® network

After protection, surface dirt can be removed by simply washing with clear water (high pressure cleaner to be used at low power). It is necessary to repeat the initial treatment according to the manufacturer's instructions and advice.

Gustafson Porter + Bowman

Pre-Application Site Surveys

The existing baseline site information provided at the competition stage has been evaluated and analysed, including:
-West Monument Scoping Study - Oct 2010
-East Monument Scoping Study - Sep 2014
-Highgate Cemetery Tree Health Review - Oct 2020
-Highgate Cemetery Conservation Plan 2019

Additional information provided by Highgate Cemetery at stage 1 was evaluated and analysed, including:
-Existing Services Report Nov 2021
-Access Audit Report Jun 2021
-Boundary Wall Condition Survey Report 2014

Surveys carried out at RIBA Stage 1:
-Tree Hazard Survey - Dec 2021
-Important Tree Survey (covering grade A and B trees) - Dec 2021
-Trees vs. Listed Monuments - Jan 2022
-Ecological Baseline Survey, including information sourced from Green Infrastructure for Greater London (GIGL) data. - March 2022
Condition Survey of Existing Buildings - March 2022

Surveys carried out at RIBA Stage 2:
-Ash Dieback Survey - Jul 2022
-Ecological Survey - Sept 2022
-Soil Survey - Sept 2022
-Trees vs Important Monuments - March 2023
-Trees vs Boundaries - March 2023
-Trees with a Future - March 2023
-3D Topographic Survey & 3DMonuments Survey - May 2023

Surveys carried out at RIBA Stage 3:
-Bat surveys - Oct 2023
-Drainage Survey - March 2024
-Soil infiltration tests - June 2024

Landscape Drawings

Plans
-HIG-GPB-ZZ-ZZ-L-DR-0001 - Location Plan
-HIG-GPB-ZZ-ZZ-L-DR-1000 - GA Masterplan
-HIG-GPB-ZZ-ZZ-L-DR-1001 - GA Plan West
-HIG-GPB-ZZ-ZZ-L-DR-1002 - GA Plan East
-HIG-GPB-ZZ-ZZ-L-DR-1003 - GA Swain's Lane/ Courtyard
-HIG-GPB-ZZ-ZZ-L-DR-1100 - Hardscape Plan West
-HIG-GPB-ZZ-ZZ-L-DR-1101 - Hardscape Plan East
-HIG-GPB-ZZ-ZZ-L-DR-1200 - Softscape Plan West
-HIG-GPB-ZZ-ZZ-L-DR-1201 - Softscape Plan East
-HIG-GPB-ZZ-ZZ-L-DR-1300 - Tree Plan West
-HIG-GPB-ZZ-ZZ-L-DR-1301 - Tree Plan East

Sections
-HIG-GPB-ZZ-ZZ-L-DR-2000 - Terrace Steps
-HIG-GPB-ZZ-ZZ-L-DR-2001 - Courtyard and Swain's Lane
-HIG-GPB-ZZ-ZZ-L-DR-2002 - Cafe Interface and Access Control
-HIG-GPB-ZZ-ZZ-L-DR-2003 - Cuttings Embankment
-HIG-GPB-ZZ-ZZ-L-DR-2004 - Steps to Cory-Wright Mausoleum
-HIG-GPB-ZZ-ZZ-L-DR-2005 - Elevated Boardwalk to Terrace

Details
-HIG-GPB-ZZ-ZZ-L-DR-4100 - Typical Hardscape Details Drainage 1/3
-HIG-GPB-ZZ-ZZ-L-DR-4101 - Typical Hardscape Details Drainage 2/3
-HIG-GPB-ZZ-ZZ-L-DR-4102 - Typical Hardscape Details Drainage 3/3
-HIG-GPB-ZZ-ZZ-L-DR-4103 - Typical Hardscape Details Paving and Kerbs
-HIG-GPB-ZZ-ZZ-L-DR-4104- Typical Hardscape Details Weirs
-HIG-GPB-ZZ-ZZ-L-DR-4500- Typical Tree Pit Details 1/6
-HIG-GPB-ZZ-ZZ-L-DR-4501- Typical Tree Pit Details 2/6
-HIG-GPB-ZZ-ZZ-L-DR-4502- Typical Tree Pit Details 3/6
-HIG-GPB-ZZ-ZZ-L-DR-4503- Typical Tree Pit Details 4/6
-HIG-GPB-ZZ-ZZ-L-DR-4504-- Typical Tree Pit Details 5/6
-HIG-GPB-ZZ-ZZ-L-DR-4505- Typical Tree Pit Details 6/6
-HIG-GPB-ZZ-ZZ-L-DR-4506- Typical Softscape Details 1/6
-HIG-GPB-ZZ-ZZ-L-DR-4507- Typical Softscape Details 2/6

Landscape Documents

-GPB-HIG-REP-0001
Volume 1 - Design and Access Statement Introduction (this document)
-GPB-HIG-REP-0002
Volume 2 - Landscape Design and Access Statement
-GPB-HIG-REP-0003
Landscape Maintenance and Management Plan
-GPB-HIG-SCH-0001
Planting Schedule
-GPB-HIG-DISH-0001
Drawing Issue Sheet

Ashgrove Ecology
Habitat condition survey and BNG documentation
Ecological Impact Assessment (EcIA)

Bartlett Tree Experts
Arboricultural Assessment BS: 5837 (2012):
Part 1- Tree survey for category A and B trees
Part 2 – BS: 5837 (2012) arboricultural implications assessment
Part 3 - 'Draft' Tree Protection Plan

Max Fordham
Sustainable Drainage Strategy
Flood Risk Assessment
Camden Flood SuDS Proforma
Landscape & Drainage Embodied Carbon Assessment
Indicative Electrical Supply Route

Caneparo Associates
Transport Statement
Tim O'Hare Associates
Soil Management Strategy