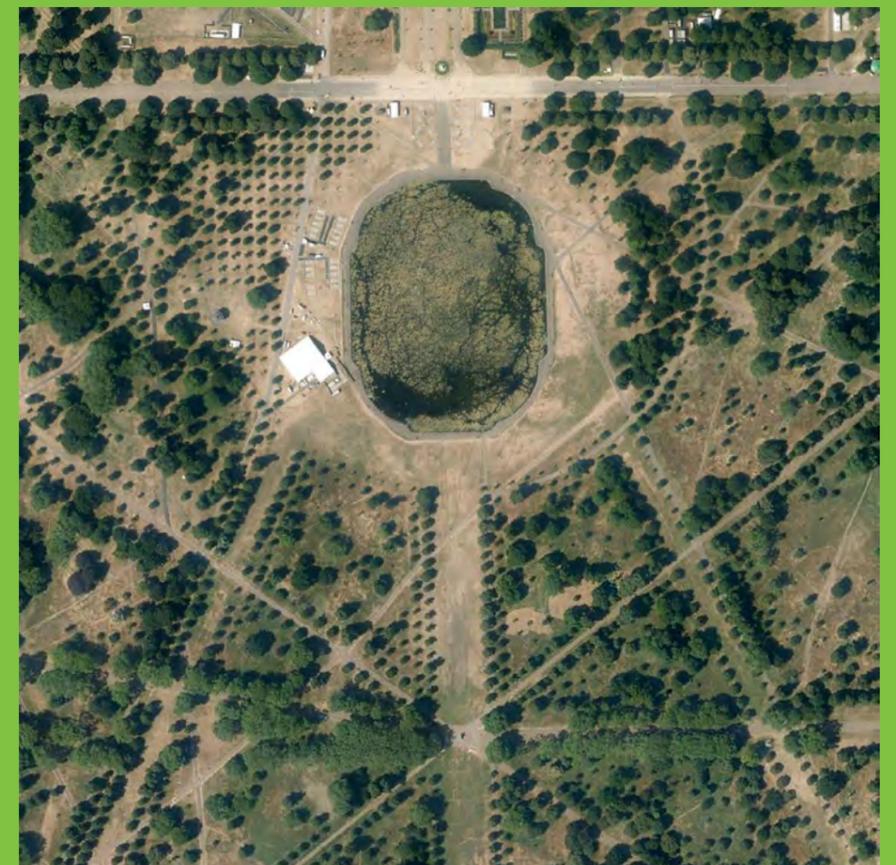
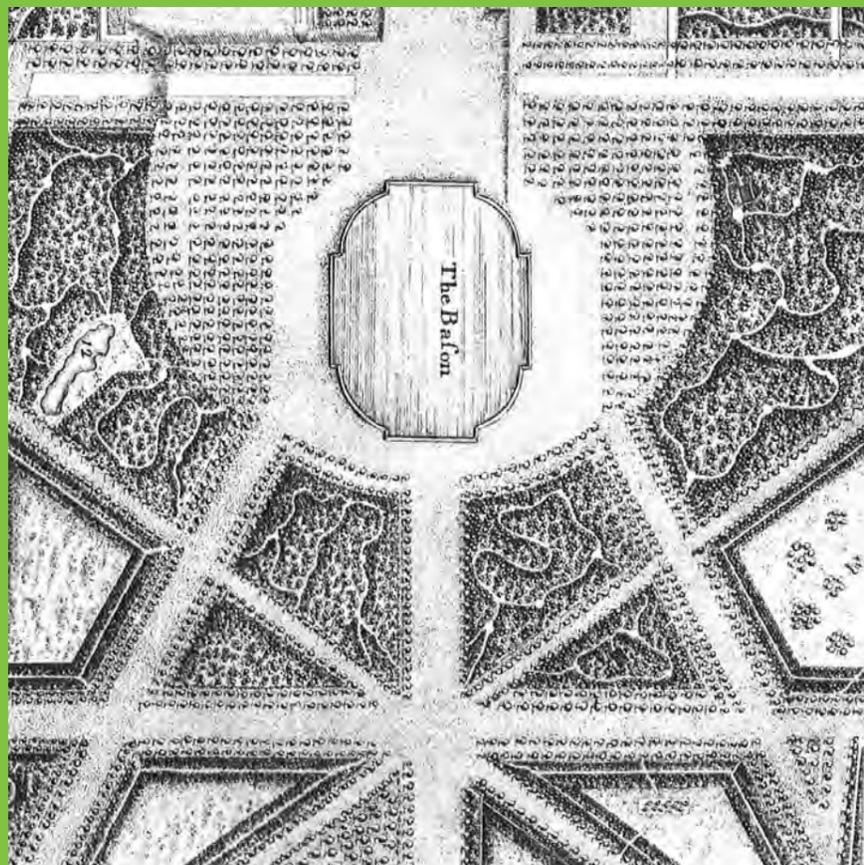


Kensington Gardens Tree Strategy 2014

Version 3.0; Final

Prepared by LUC in association with Richard Flenley
16.03.2015



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Fig. 1: Tree proposals summary

1 Executive Summary

This study follows on from the 2010 Tree Strategy for Kensington Gardens and focusses on providing specific proposals for tree planting in specific areas and avenues within the Gardens. The Action Plan has been developed in conjunction with the TRP team with the objectives of ensuring suitable succession - mainly in avenues - which will reinforce the outlines of the historic Bridgeman plan, providing landscape and ecological enhancement as well as arboricultural interest.

The scale of proposed planting is modest but particular in locations, distribution, density and species (as shown in fig. 1). Overall it is proposed to plant some 280 trees - which could reasonably be undertaken over the next 5 to 8 years at about 40 to 50 trees per year, allowing for the additional workload of proper establishment maintenance.

The species proposed are particular to location in 9 of the constituent avenues and have been carefully considered to achieve a suitable balance of historical integrity, ecological enhancement, landscape diversity and arboricultural interest. In future years the plans may become increasingly subject to change and updating if unpredicted losses appear. However, as planned, the Action Plan indicates the following numbers in relation to existing populations.

	% of total population 2010 survey	% of trees in avenues of 2010 survey	% of trees in 2014 Action Plan
Lime	39.6	26	27.8%
Sweet Chestnut	5.7	3	13.2%
Horse Chestnut	11.9	3	-
Plane	9	6.5	12.8%
Oak	7.2	0.5	28.5%
Other	26.6	6.6	17.7%
TOTAL	3178	1568	100%

The Action Plan represents roughly 7% of the 2010 tree population. Some planting - as in the Great Bow - is essentially like-for-like replacement; but the majority of planting proposed here is to fill existing gaps and to provide succession or reinforce weakened patterns in the Bridgeman layout.

The plan acknowledges that there is already considerable regeneration of oak, sweet chestnut and thorn in some of the "meadow" Quarters. There will need to be further selection and control to retain the openness of meadow areas but benefitting from recruitment of these species in limited "bosquet" areas where this is compatible with character and use.



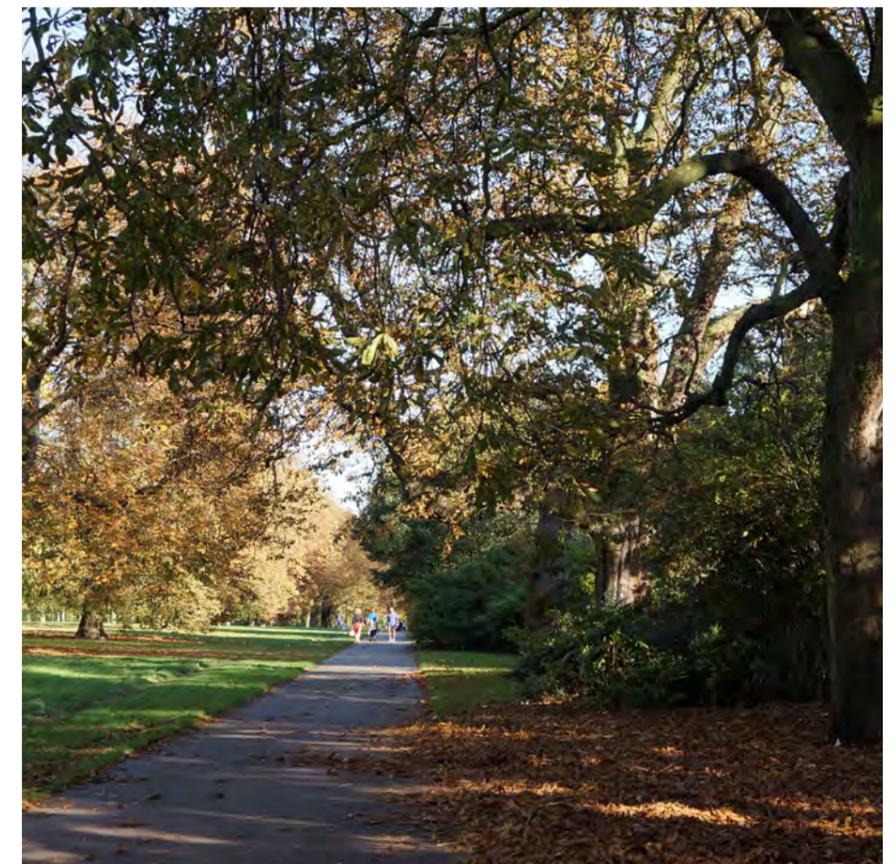
Planes along Lancaster Gate Walk



The view from Buckhill Axis



Norway Maple on the Broadwalk



View along the South Roundabout

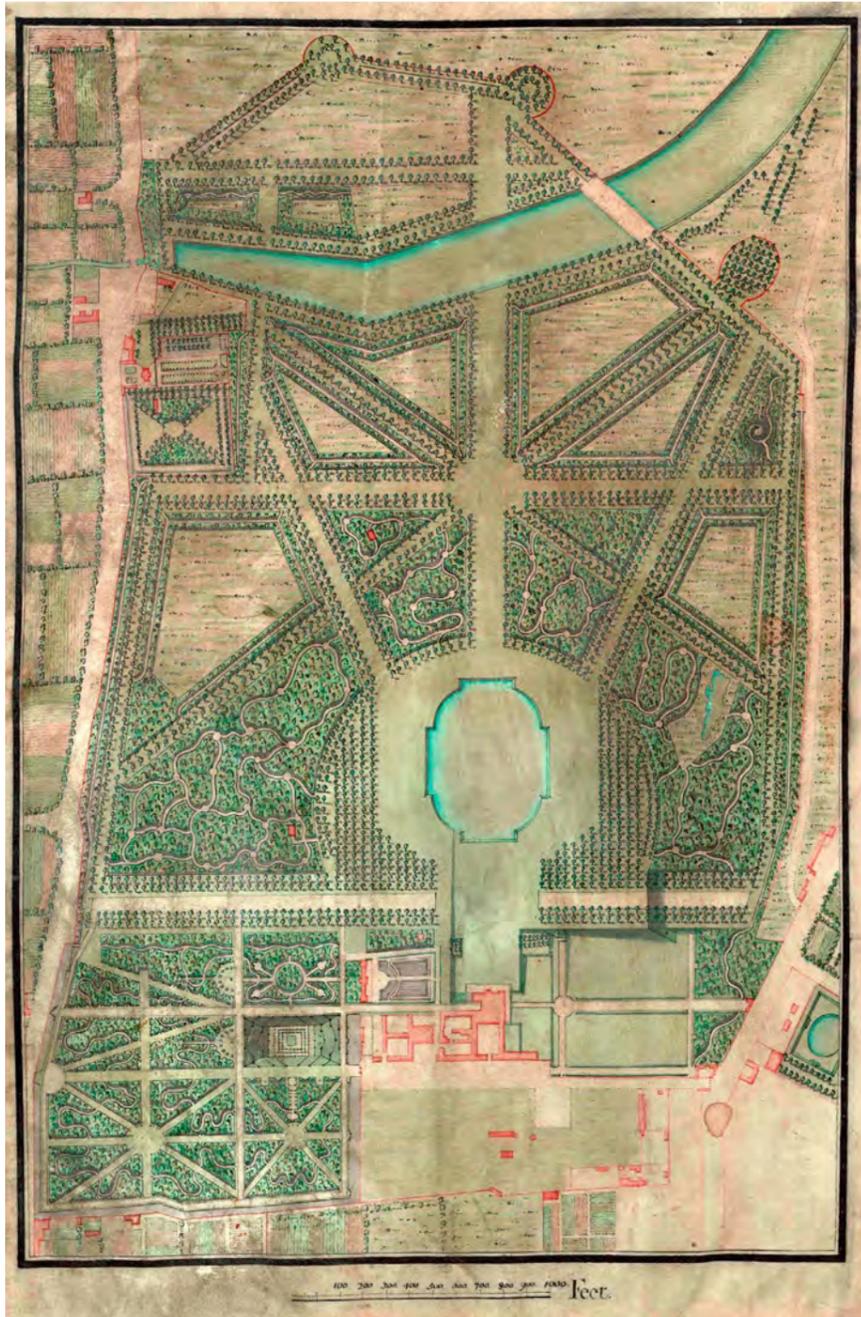


Fig. 2: The 1733 Charles Bridgeman plan is an 'as built' drawing of the completed layout

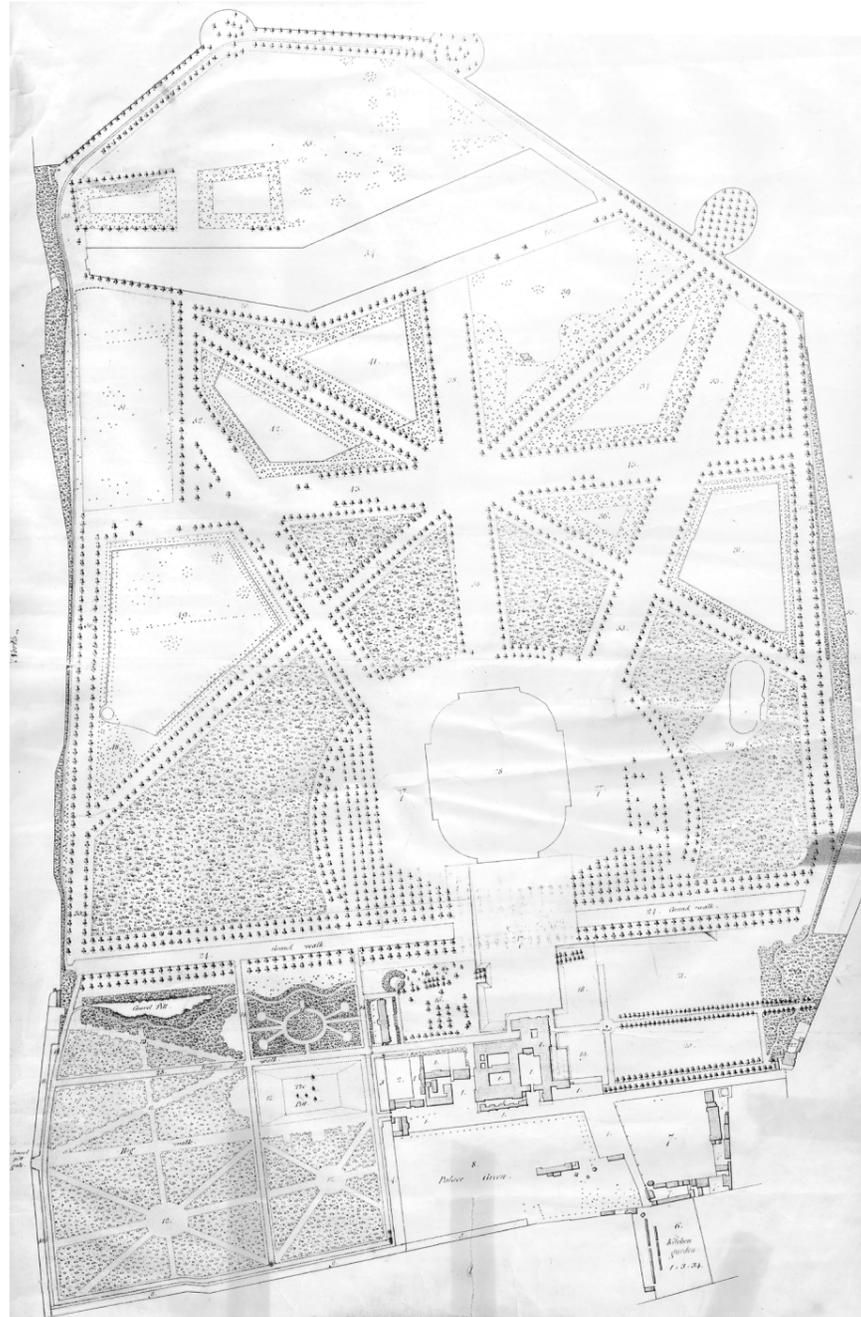


Fig. 3: The 1784-87 Forsythe plan provides a useful indication of changes during the 18th Century

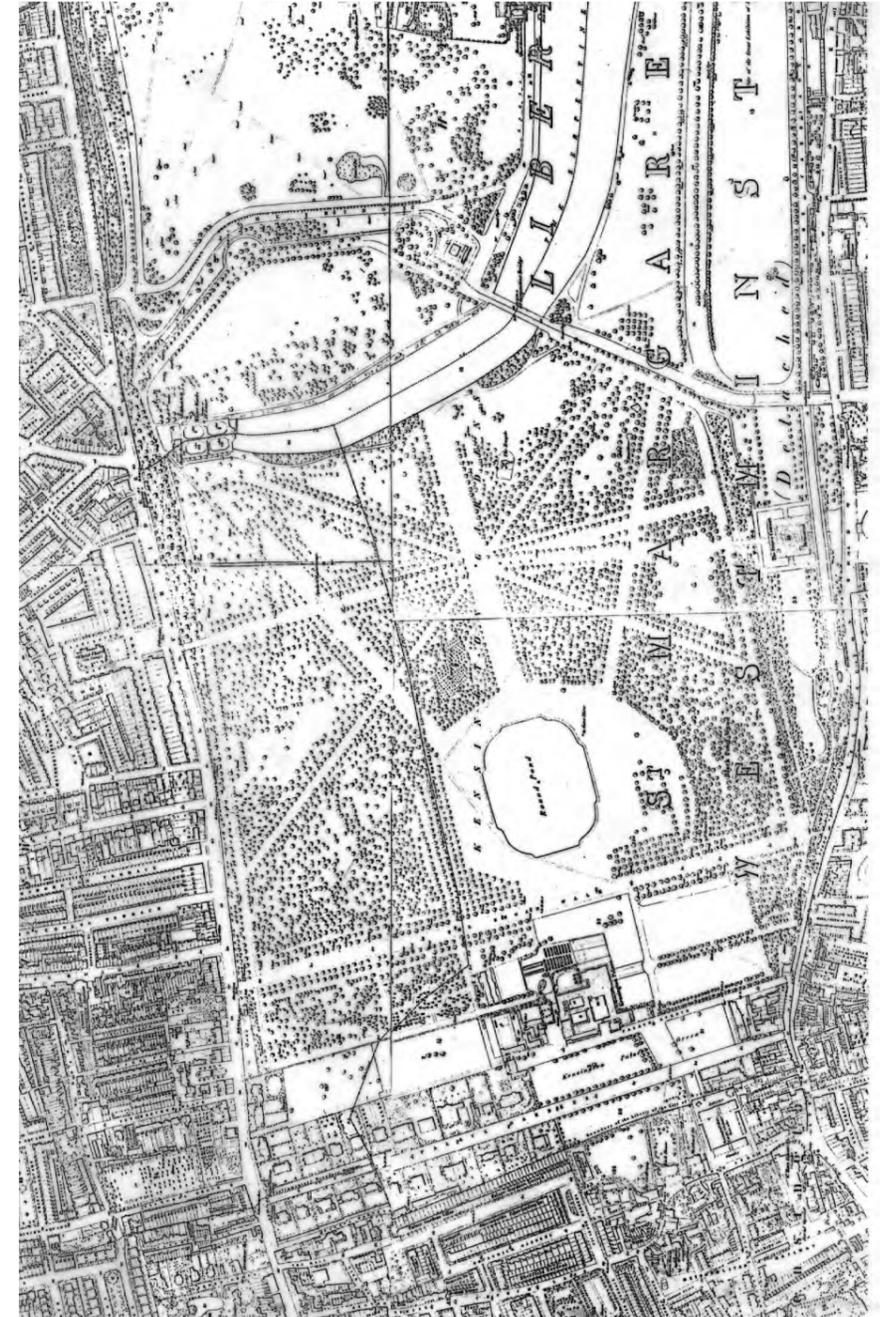


Fig. 4: The 1870 OS plan records changes such as the Albert Memorial, under construction at this time

2 Introduction and Purpose

This review of the Tree Strategy in autumn 2014 picks up from the baseline of the 2010 study (LUC for TRP) and focuses on several avenues which are likely to be of particular importance in the next 5 to 10 years. The avenues in question have been identified by the TRP team. LUC have worked closely with the team to assess and review opportunities, risks and options for renewal and replacement planting which will help to maintain or locally reinforce an appropriate pattern and diversity of trees in the Gardens.

As identified through the Historical Surveys (LUC 1982), the various editions of the Kensington Gardens Management Plan and the 2010 Tree Strategy, the pattern of tree planting still reflects substantially that laid out by Charles Bridgeman in the period 1726-33 (fig. 2). The 1784-87 Forsythe plan (fig. 3) is used as a historical reference point. There are some later adaptations and additions (such as the loss of the Bayswater House enclosure and the secondary alignment of Lancaster Gate Walk in response to the siting up the Albert Memorial, shown on the 1870 OS, fig. 4); but the main structural avenues defining the Quarters are of Bridgeman, albeit in second or third generation of trees.

The study and its resultant Action Plan respond directly to policies and recommendations which were formed in the Kensington Gardens Management Plan (2006–2016) and actions identified in the Kensington Gardens Operations Plan, both of which were used in the latest Green Flag submission.

The evidence for original species in these respective avenues is thin. Accounts suggest that lime and elm were major components and sweet chestnut was also significant. However the potential planting palette of native forest trees is more limited at the present time. This is due to the loss of Elm (to Dutch Elm Disease since 1970s), the increasing loss of Horse Chestnut (to bleeding canker: *Pseudomonas syringae* and leaf miner: *Cameraria ohridella*) and the limitations on planting Ash (due to *Chalara fraxinea*) (although it does not appear to have been a significant component in Bridgeman). There are now also threats to Plane (canker stain: *Ceratocystis fimbriata*) and Oak (Oak processionary moth: *Thaumetopoea processionea* and acute oak decline). Nevertheless the balance between visually strong assemblies and arboricultural diversity is one of the characteristics of Kensington which has public appreciation and acclaim.

The study has essentially been a team effort – and much the stronger for that. The feed-in by and debate with different team members has been important in generating ideas, reviewing possibilities and coming to rounded recommendations. However the context remains dynamic; change may arrive unexpectedly in avenues and quarters outside the core of this study. In any case there will still be a need to take account of such other “lateral” changes and occurrences which may then affect management priorities for the whole.

Thus the recommendations put forward here are not necessarily the whole story... and they may become more in need of update and review in the later years as progress is made with the early priorities.

As part of this study it was felt important to set down a traceable logic of the way in which the recommendations were shaped. Outwardly this is “justification”; but more importantly it attempts to show the process so that others can follow and even challenge what is planned here with best intent.

The study seeks to maintain an overall perspective of the historic pattern, with a current population of some 3,200 trees and with a reasonable age distribution; good diversity and balance of formal and informal layout – which attracts and largely satisfies.

There is a particular qualification to make about the accuracy of the base plans as represented in Arbotrack. The canopies shown on the base survey (and by interpretation, the trunk positions of individual trees) were extrapolated from aerial photography (c. 2006). More detailed positional examination in the current studies has shown that the transposition, while confirming the generalities of pattern and distribution, is variably inaccurate – in some cases, like the North Feathers – being up to 7m out of position. It has been necessary to readjust the positions / alignments in key avenues although such “correction” is still mostly only by pacing rather than by measured surveying.

Field verification also threw up a few surprises. It confirmed for example that spacing of trees – even within the same avenue of apparently similar planting vintage – may vary considerably. Planting at 11.5m centres is fairly typical although variations run from 9m up to 15m; and in some cases the original spacing has been thinned (as for the maples on the Broad Walk) to give a 23m spacing of alternate trees.

These variations in spacing probably reflect, in part, incremental replacement planting in various historical phases, plus elements of “fitting in” to accommodate other additions including paths and artefacts.

In the main the alignments seem to have stayed substantially “in line” of the original rows even though spacing along the rows has been varied – as described above. However there are variations even here and a couple of curiosities now show up: the first of these is the alignment of Great Bayswater Walk when compared to the south-eastern corridor of Mount Walk. In practice these two “rides” might be assumed to be symmetrically balanced in relation to the central axis of Front Walk and forming the *patte d’oie* from the East front of the Palace; but they are at slightly different angles. There is a further “complication” at Great Bayswater Walk in that the southern inner row (sweet chestnut replanted c.1990s) has leap-frogged into the ride so that the Speke Monument – which was centrally placed in the ride according to 1870 OS – is no longer in the centre but slightly to the south of the axis. The puzzle of alignment to the spire of St Mary Abbott’s in Kensington is also confirmed here – being on the axis of Budge’s Walk – the footpath on the northern side of the ride rather than in the central axis of the ride itself. Curiously, Speke, the statue of Queen Victoria in front of the Palace and the church spire form their own “ley-line” within the ride.

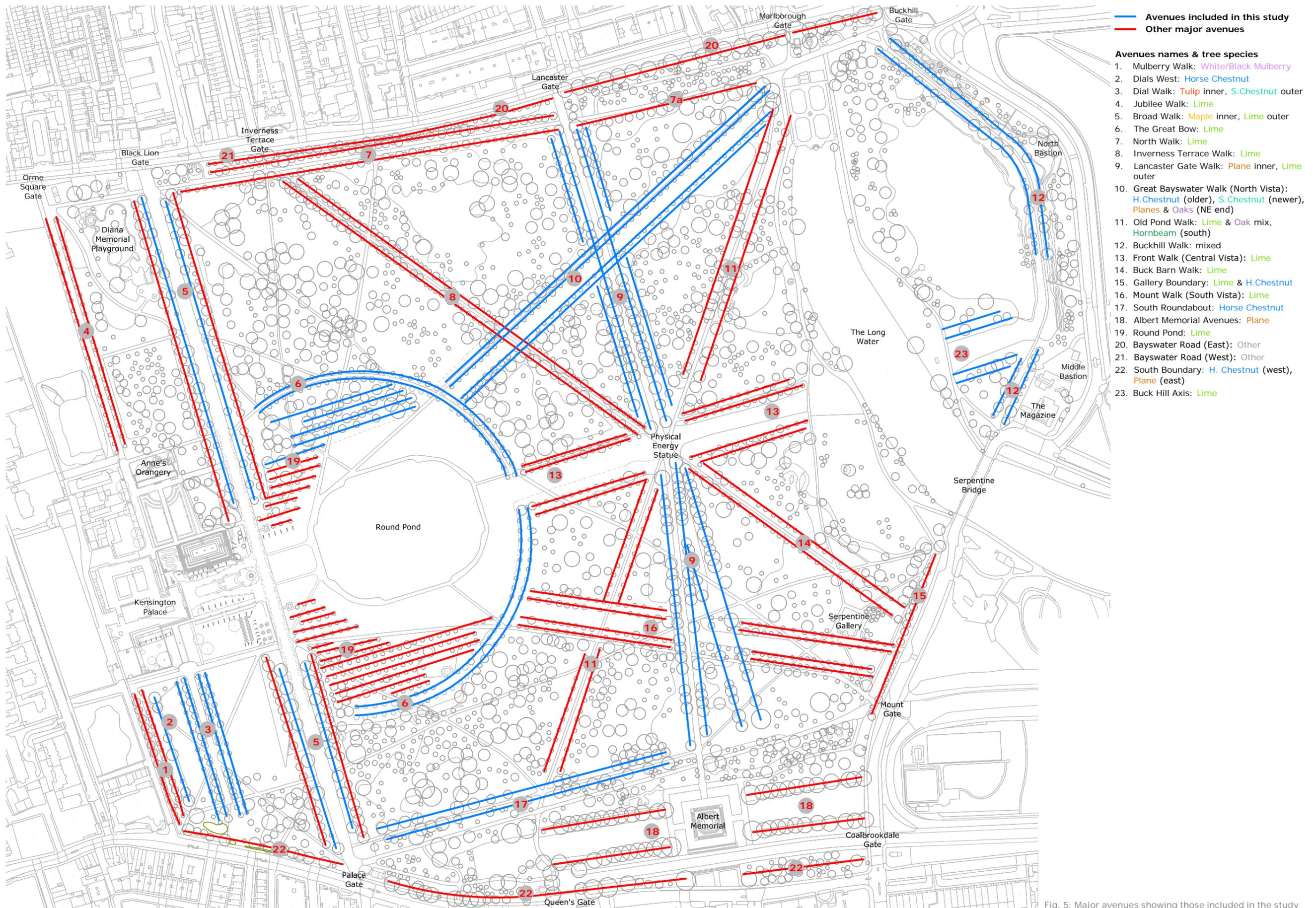


Fig. 5: Major avenues showing those included in the study

3 Methodology

The methodology for this study has been to use the TRP survey plans from Arbortrack and, by field walking, to update these plans with any further losses/additions. There is quite a range of positional variation and occasional error in the original survey some of which has required correction and adjustment even to complete the fieldwork (for example the southern inner row of trees forming Great Bayswater Walk was not shown on true alignment; similarly, the spacing and curvatures of The Great Bow did not tally with what was being seen in the field). Where such correction has been made it has mostly been done by pacing. In some cases (such as Dial Walk) incremental measurements were made along lines and between rows to create a more accurate picture of the existing layout.

LUC did the fieldwork to check presence and general condition of each of the 8 avenues identified in the brief. A ninth avenue at Buckhill was subsequently added in discussion with the team (these are shown in fig. 5). LUC tabled initial ideas and outline proposals for team discussion and the process was much assisted by doing a joint walkover to review each avenue in context as well as seeing these as a part of the wider set within Kensington Gardens.

The process then followed that indicated on the flow chart (fig. 6). Having estimated an initial planting programme - to get a general scale to the whole operation - the gaps in individual avenues were recorded; potential fellings or anticipated losses [if any] were assessed and initial planting options set out for further discussion with the team. However, as the proposals for one avenue might then have influence on the species or timings for another avenue, and for the landscape image/effect of the Gardens as a whole, this became an iterative process, also taking into account choices in layout and density.

By way of example it had previously been identified that the inner rows of Maples along the Broad Walk had been deteriorating and had suffered significant squirrel damage such that several had already been removed. However this was partly disguised by some of these damaged trees being the alternates which were removed to allow for the wider crowns of the maples to "make space" from the late 1990s. A number of options have been considered e.g. retaining and simply interplanting with Maples in the available gaps to make up a more complete pattern of alternates; or the possibility of removing all Maples in one clearance and then having - spatially - a free hand to replant a full and symmetrically balanced avenue with a different species. Such matters were the subject of team discussion. But of course a decision here - on species - could also influence appropriate choice of species in another avenue to avoid over concentration on one species.

Thus team debate also helped to clarify priorities and to develop the Action Plan which can be applied over the next 5 to 10 years.

LUC were then able to produce planting plans for each of the Avenues concerned with additional notes on setting out where necessary.

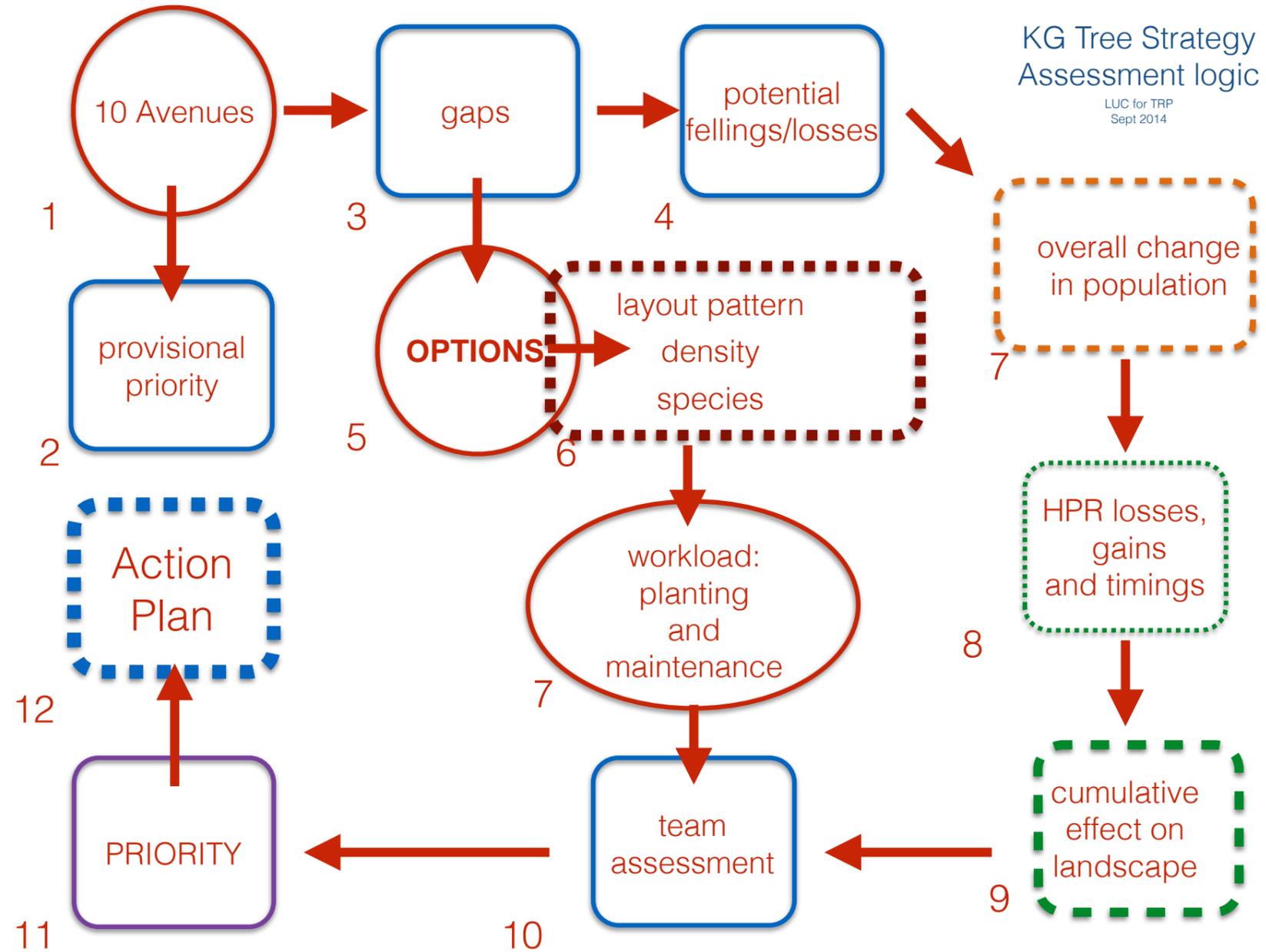


Fig. 6: Assessment logic flow chart

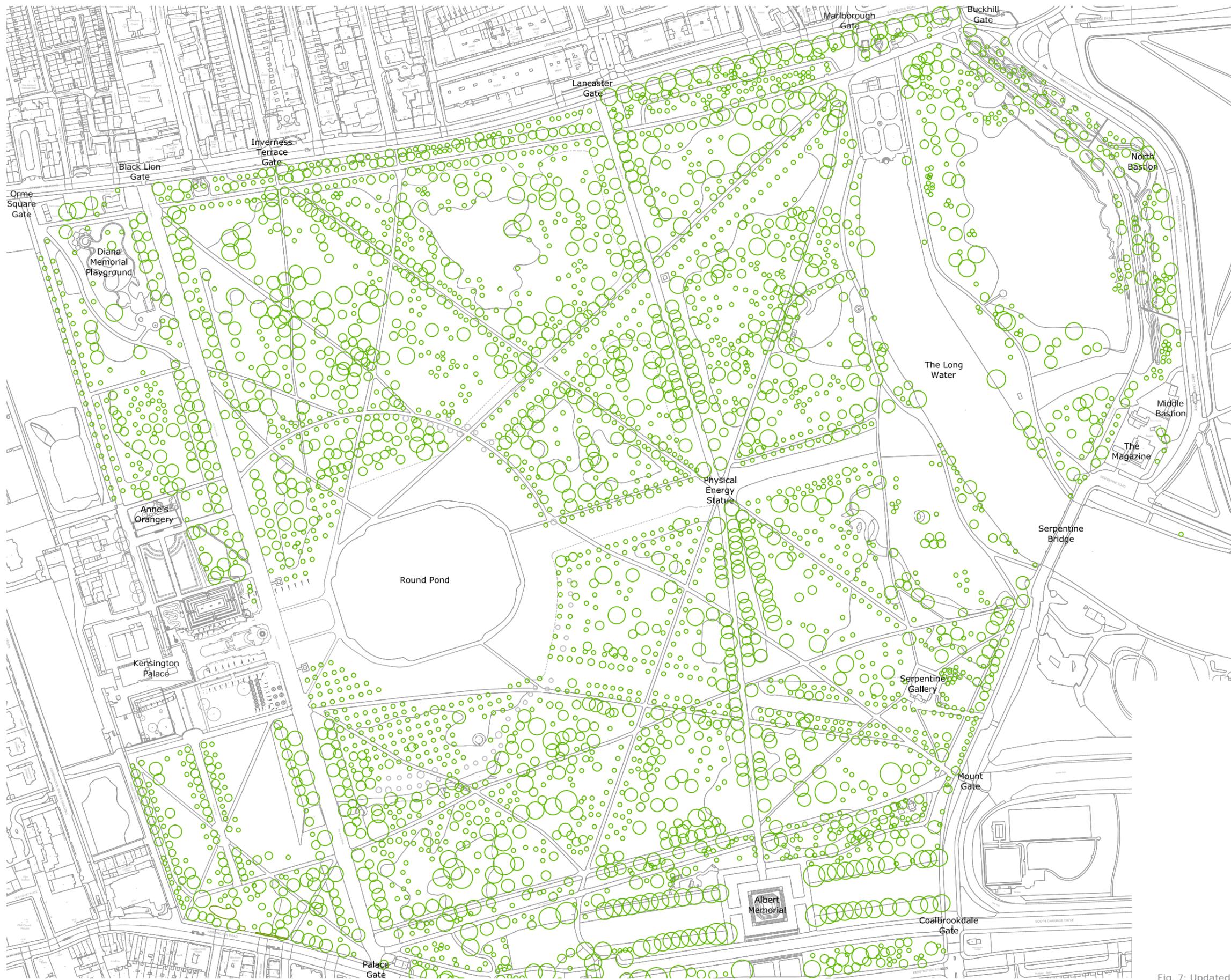


Fig. 7: Updated existing layout

4 Baseline and Principles

This study takes as its starting point the Tree Strategy for Kensington Gardens prepared in 2010 by LUC in conjunction with the TRP team. The baseline survey was undertaken by LUC using TRPs 2008 base plan (itself extracted from aerial photography of 2006) and updating locally for recent gains and losses. It was acknowledged that positional survey of individual trees was not particularly accurate although the overall distribution and pattern were acceptable for those purposes.

The headlines of the 2010 Strategy study can be summarised:

- Overall tree population: 3178 trees
- No. of trees in avenues: 1568 trees (46% of all trees)

Main species of whole tree population at 2010 and numbers and percentages in avenues:

Lime	1358	(39.6%)	884 in avenues	(26%)
Sweet Chestnut	195	(5.7%)	108 in avenues	(3%)
Horse Chestnut	408	(11.9%)	106 in avenues	(3%)
Plane	307	(9%)	224 in avenues	(6.5%)
Oak	246	(7.2%)	18 in avenues	(0.05%)
Other trees including ornamentals and exotics (includes maples, hornbeam, Indian Horse Chestnut, Liriodendron)	913	(26.6%)	228 in avenues	6.6%

Since 2010 there have been some additions such as the Feathers on the Palace / Round Pond frontage, some trees in the front Quarters and the infill planting representing perhaps 70 trees and partly offset by a few losses – perhaps a net increase of 50 trees in this period.

At the outset of this study it was estimated that between 250 and 350 trees would be needed (depending on which options are adopted) in order to address the nine target avenues over the next 5 to 10 years. These numbers were provisional and have then been tested through the present study; but they indicate a population change of roughly 7% to 10%, partly offset by a smaller number of removals and losses.

In theory, the recent changes (losses and additions) have been recorded in ArboTrack; in practice not all have yet been updated, and there are positional inaccuracies of the original 2008 base survey which add to the complications of the current base (updated as shown in fig. 7).

The action plan for this phase of planting is targeted at the next 5 to 10 years (say 2014 - 2023) and is based upon the following principles:

1. Over-riding priority to conserve existing trees for **longevity**, as long as possible;
2. Secure new planting which will retain / reinforce the **heritage pattern** (predominately Bridgeman);
3. Plant only where there is **suitable space** to enable proper establishment (wide spacing or open run of spaces);
4. Remove trees **judiciously** (with appropriate notifications) to enable "sets" of trees to establish as similar age groups;
5. Select **species** (lime, sweet chestnut, oak, hornbeam) which are appropriate to the Bridgeman setting in main avenues;
6. Consider and review risks of existing and potentially incoming **diseases** which may limit or restrict use of some species (eg currently Horse Chestnut, Ash should not be planted);
7. Later avenue additions and adaptations may use other trees, including "**exotics**" in short runs – usually in runs of 3 to 5 trees of same species;
8. While respecting the limited palette of forest trees for the main Bridgeman avenues, seek to provide a **diversity of species** elsewhere which enhance ecological value and arboricultural interest;
9. Acknowledge that **later stages** of this planting plan may increasingly need to take account of any other changes – including unexpected losses to storm, disease etc. – which in turn may influence scope and priority;
10. There is an increasing need to **update the base plan** with accurately surveyed tree positions to assist in future reviews and setting out.



- Legend**
- Existing Tree
 - Existing Tree (new TOPO)
 - Proposed Tree
 - Possible Future Tree
 - Recently Removed Tree
 - Remove Tree (TBA)
 - Proposal TBA
 - Possible Relocation
 - Potential Veteran Tree
 - Paths etc
 - Setting-out Line

Latin name	Common name	Total	The Great Bow	Dial Walk	The Diaks - West	The Broad Walk	Lancaster Gate Walk	The South Roundabout	Great Bayswater Avenue	The North Feathers	Buck Hill Walk
● Acer platanoides	Norway Maple	15*			15*						
● Aesculus flava	Common Buckeye	3					3				
● Aesculus indica	Indian H. Chestnut	2					2				
● Alnus glutinosa	Common Alder	8					8				
● Carpinus betulus	Common Hornbeam	6						3	3		
● Castanea sativa	Sweet Chestnut	37	15					3	19		
● Fagus sylvatica	Common Beech	19						10	2	7	
● Juglans nigra	Black Walnut	2						2			
● Liriodendron tulipifera	Tulip tree	1	1								
● Morus nigra	Mulberry	1			1						
● Nothofagus dombeyi	Southern Beech	6+6			6+6						
● Ostrya carpinifolia	Hop Hornbeam	2					2				
● Platanus x acerifolia	London Plane	36					36				
● Quercus lucombei	Luccombe Oak	2						2			
● Quercus petraea	Sessile Oak	78+41			53+37			12+4	8	5	
● Tilia cordata	Small-leaved Lime	78+42			53+37			22	1	7	6
Total		281+47	42	16	7+6	53+37	58	15	30+4	23	37

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Kensington Gardens Tree Strategy

Client: The Royal Parks

Title: Tree Proposals Masterplan

Scale: 1:1500 @ A0 Status: Information

Date: 01/10/14 Drawing No: 6172 010 Sheet: B

Fig. 8a: Tree Proposals Masterplan (see enclosed A0 version for detail)

5 Proposals

As indicated in the Flow Chart Methodology, the process of refining the proposals for the 9 selected avenues and appendages has been essentially iterative. The prescription for one avenue depends in part on what is happening in the other avenues – particularly in relation to species choices but also influenced by priority and timings as well as overall landscape effect.

There are of course continuing uncertainties over the health of key species – Horse Chestnut, plane and to a lesser extent, oak. Incoming disease and losses could easily cause a shift in the possibilities and priorities. However, the current proposals provide a realistic sequence for planning these renewals on existing evidence.

An assessment has therefore been made of each of the constituent avenues in the study – to determine existing populations in each row, overall condition, existing gaps and likelihood of early losses which could influence choices and priorities for replanting.

The overview is also made in the context of the historical pattern – generally as indicated by the Bridgeman plans (1733-34), the Forsythe plans (1784 - 1787), the latter showing the Bridgeman layout at about 50 years maturity, and showing some evidence of tree losses in particular avenues. A further check has then been made against the O.S. 1870 edition at 1:2500 scale which is fairly accurate in its depiction of trees (including separate symbols for recently planted or young trees). Together, review of these plans gives some indication of change bearing in mind that at 2014 we are some 290 years after Bridgeman's original plantings and there are few (if any) survivors from that period, most trees being of second, third and sometimes fourth generation.

The Tree Proposals Masterplan (fig. 8a and LUC drawing 6172_010) provides an overview of the proposed trees whilst the table (fig. 8b) summarises the planting numbers.

Prioritisation

There is some flexibility around the actual timings for planting up the trees identified here but in principle it is envisaged that about 50 trees per year is a manageable target, taking account of the ongoing requirements for aftercare in early establishment. The team agreed the provisional prioritisation of avenue implementation, shown here with indicative timescale:

Priority	Timescale	Avenues	No. trees
1	Provisionally 2014-16	The Great Bow; Dials Walk & Dials West; Great Bayswater Walk (SW)	42 22 5
2	Provisionally 2017-19	Broadwalk; Lancaster Gate Walk (North); Great Bayswater Walk (Central); Buckhill Axis	53 36 7 13
3	Provisionally 2020-23	Great Bayswater (NE); Lancaster Gate Walk (South & Spline); North Feathers; South Roundabout; Buck Hill Walk	18 22 23 15 24

The following chapters provide a summary of the proposals for each avenue with a details section, historical context, existing layout plan and proposals plans indicating suggested species. Detailed setting out plans follow on in Appendix 1.

Latin name	Common name	Total	The Great Bow	Dial Walk	The Dials - West	The Broad Walk	Lancaster Gate Walk	The South Roundabout	Great Bayswater Avenue	The North Feathers	Buck Hill Walk
● Acer platanoides	Norway Maple	15*					15*				
● Aesculus flava	Common Buckeye	3						3			
● Aesculus indica	Indian H.Chestnut	2						2			
● Alnus glutinosa	Common Alder	8					8				
● Carpinus betulus	Common Hornbeam	6						3	3		
● Castanea sativa	Sweet Chestnut	37		15					3	19	
● Fagus sylvatica	Common Beech	19						10	2	7	
● Juglans nigra	Black Walnut	2						2			
● Liriodendron tulipifera	Tulip tree	1		1							
● Morus nigra	Mulberry	1			1						
● Nothofagus dombeyi	Southern Beech	6+6			6+6						
● Ostrya carpinifolia	Hop Hornbeam	2					2				
● Platanus × acerifolia	London Plane	36					36				
● Quercus lucombe	Luccombe Oak	2						2			
● Quercus petraea	Sessile Oak	78+41					53+37	12+4	8	5	
● Tilia cordata	Small-leaved Lime	78	42				22	1	7	6	
	Total	281+47	42	16	7+6	53+37	58	15	30+4	23	37

* option only, not carried through to totals
+ 37 possible future trees, depending on losses

Fig. 8b: Table summarising planting numbers

6 The Great Bow

TRP had already decided to proceed with replanting some 39 trees in the Great Bow. The original re-planting of these limes, following Bridgeman's plan, was undertaken in the 1990s with mixed success and some subsequent replacements. Time has shown that the clonal variety and planting were not ideal; and this has resulted in weakened forms, many of which also generate strong epicormic growth. The net effect is that such trees will become suspect even in the short term and so the opportunity is taken now to replace those which are badly formed with good stock. A 211 notice has been confirmed and the works have been completed.

The majority of replacements (30) are in the southern arc with a further 12 in the northern arc close to the intersection with Budge's Walk. Setting out for this northern arc is firmly established by the alignment of The Great Bow pathway; but in the southern arc there is no constructed path – just the grass ride; and the current alignments are locally "flattened". LUC suggest this area is surveyed so that accurate GPS co-ordinates can be provided for the setting out. In turn this may then show that some of the retained trees are also slightly out of position and it may prove necessary to adjust / transplant some of these.

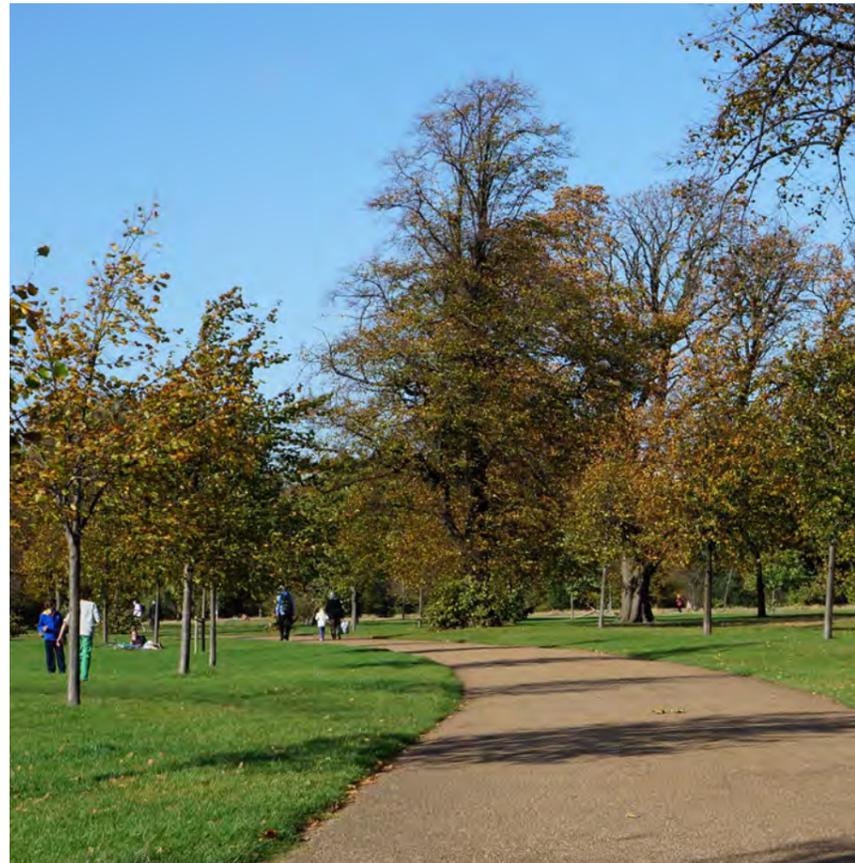
Currently it is intended to retain the southern arc as a grass ride rather than continue the constructed gravel-finish path. Two maturing limes with low canopies, on-line and at each end of the southern arc mask the entry into the grass ride; as suggested these have been crown-lifted to improve visibility. In the longer term it may well prove preferable to remove these two trees to give room for the adjacent "arc" trees to develop.

Details

- Name: The Great Bow
- Location: Surround the Round Pond and connecting to the Broadwalk
- Thumbnail history – as shown on
 - Bridgeman 1733: Double row of trees in, 840m long
 - Forsythe 1784 & OS 1870: present
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving	Replace
Outer	62	-	100	23
Inner	58	2	97	19

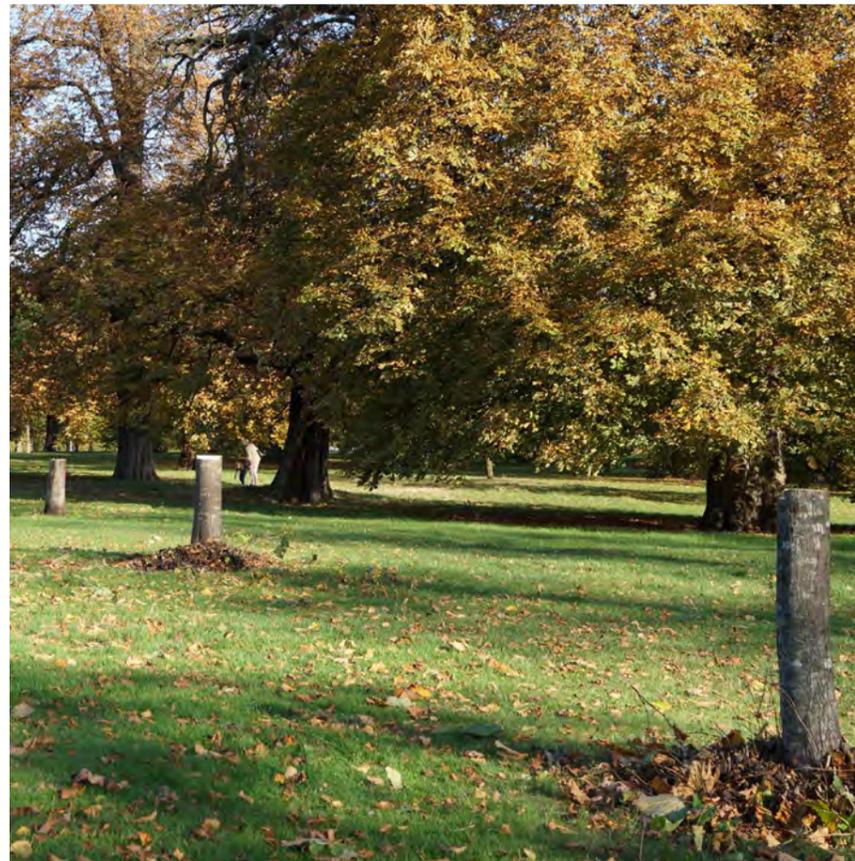
- Issues / risks: Some poorly formed stock will start to split and fail.
- Strategy: Replacement of 42 poorly formed specimens
- Options
 - layout/density/spacing: We suggest a topo survey of retained trees to facilitate accurate setting out of trees into correct positions
 - species: lime
 - removals: 42 – directly replaced
 - timings: Immediate – Autumn 2014
- Priority: 1
- Considerations for future continuation / management:
 - as replacements will be to new accurate positions this may expose some of the conserved trees in the southern arc to be "out-of-line". They may need local adjustment / transplanting. Trees in northern arc are can mostly be replaced "on station".
 - crown lift two existing mature limes at South West end of arc and Front Walk to improve visibility at start of grass arc.
- New trees: 42.



The northern arc of the Great Bow with Lime trees establishing well



One of the poorly formed trees, before removal



Stumps of removed trees



All stumps have now been removed, ready for replanting in spring 2015



Fig. 9: The 1784 Forsythe plan shows an inner avenue of elm trees

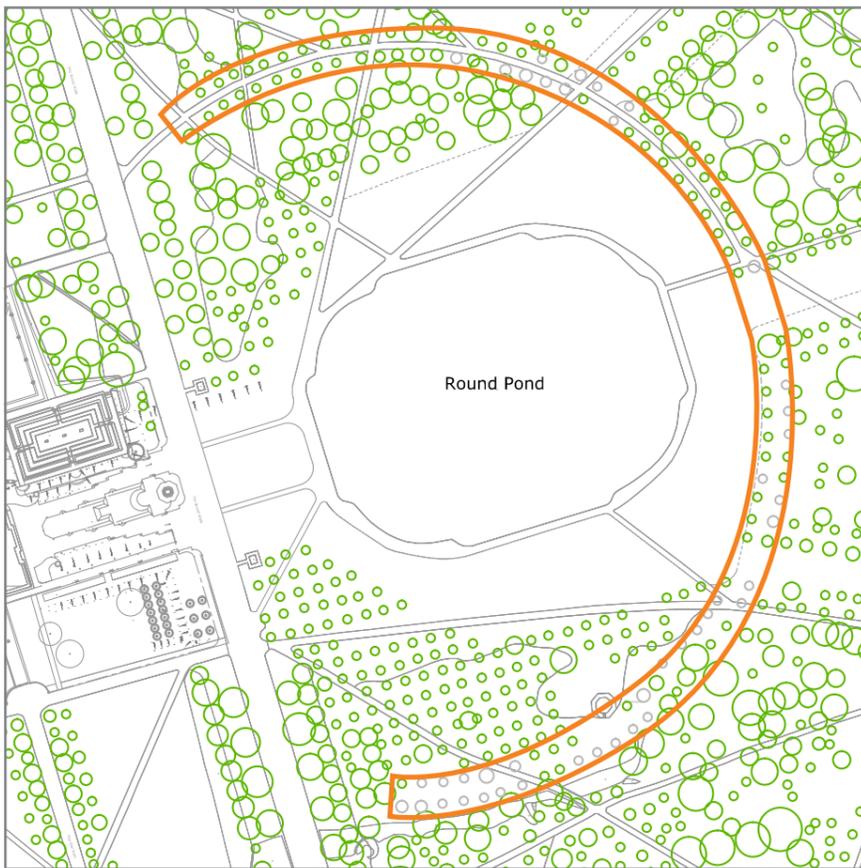


Fig. 10: Existing layout (removed trees shown in grey)

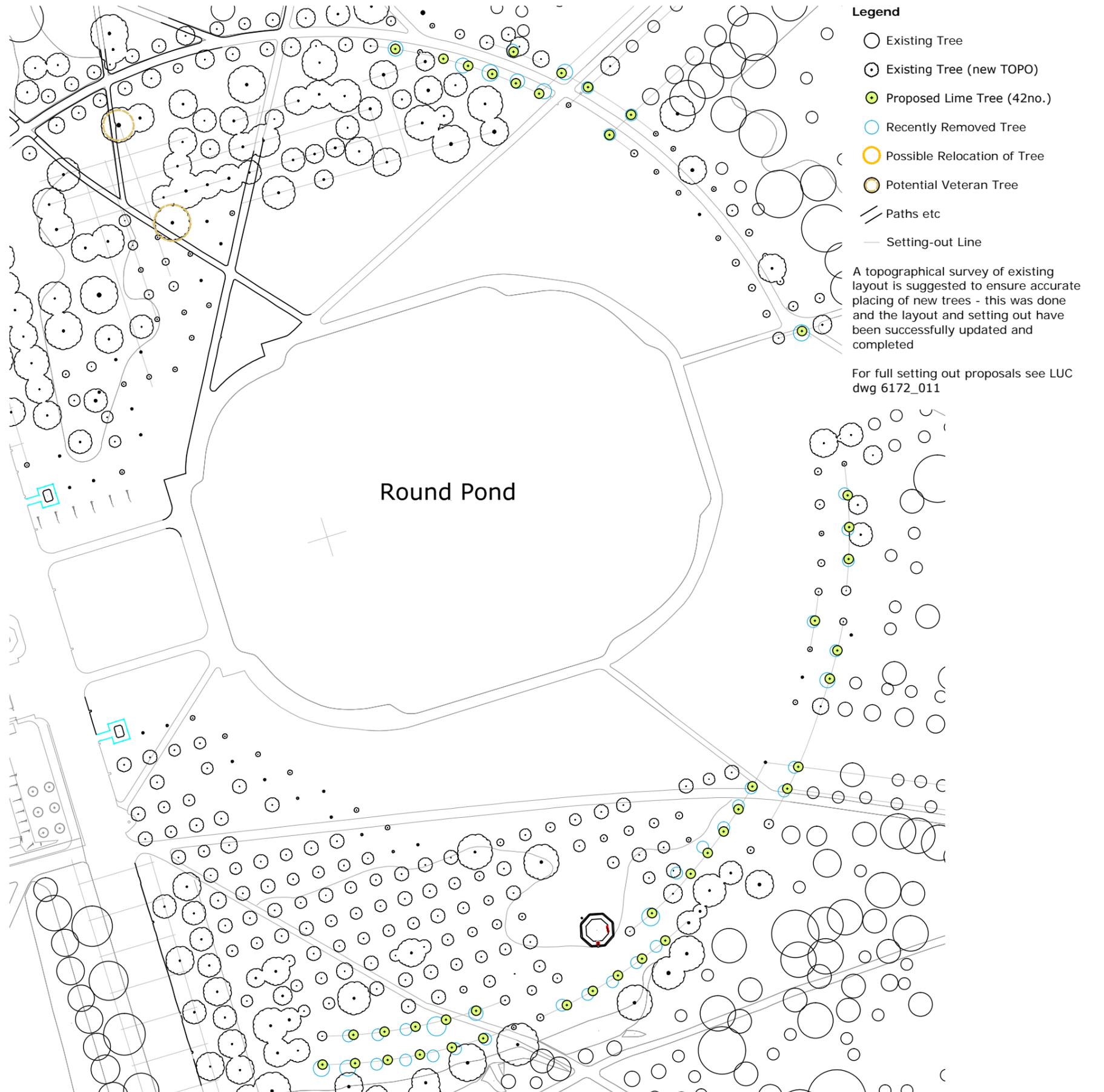


Fig. 11: The Great Bow proposals

7 Dial Walk

After consideration of numerous options the proposal here is to retain – for the time being – the inner rows of Liriodendron but to thin them to retain the axial view to the southern elevation of the Palace. A single gap in the middle section of the eastern row can be planted (Liriodendron) as can 5 missing Sweet Chestnuts (with some spacing adjustments to avoid paths - the inclusion of this is to be agreed) and a further 10 Sweet Chestnut (5 on each side) forming the “antlers” near the Alcove (cross) path.

As part of this there is also the option to remove the top pair of Liriodendron trees to create more of an opening and feeling of space in this area. Also indicated on the plan are the possible adjustments to the kerb lines to reflect the original layout and further enhance this entrance way to the Palace.

In due course (probably 20-25 years hence) when the more recently planted Sweet Chestnuts have attained good volume and scale, it may then be appropriate to remove the Liriodendron rather than to have an ever increasing workload of side trimming to maintain the axial vista of the Palace’s South elevation.

Details

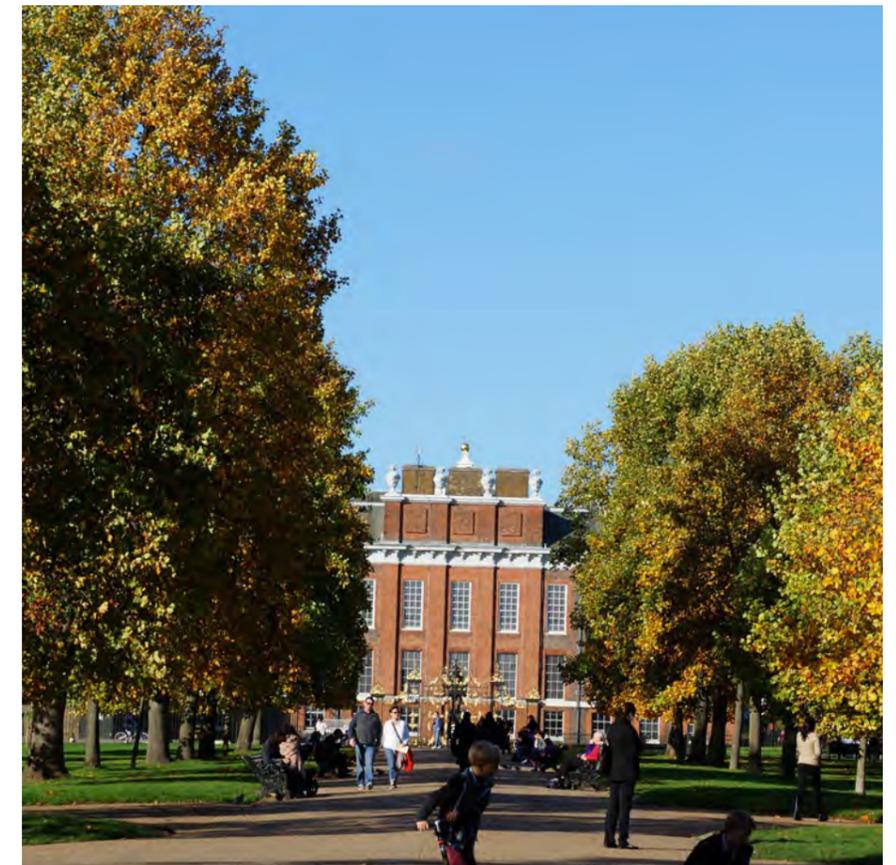
- Name: Dial Walk
- Location: Central axis to South elevation of Palace – 4 rows of trees
- Thumbnail history – as shown on
 - Bridgeman 1733: inner rows only (possibly surviving hedge?)
 - Forsythe 1784: inner rows - elms
 - OS 1870: inner rows – elms still in tight corridor
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving	Spacing (m)
Liriodendron West	18	-	100	10
Liriodendron East	19	1	95	10
Sweet Chestnut West	13	2	86	13
Sweet Chestnut East	12	3	80	13

- Issues / risks: All are young and will fill out canopies in next 25 years. Liriodendron need to be trimmed to maintain axial view to Palace elevation. Eventually they may all be removed when Sweet Chestnut have attained canopy volume to hold the scale of view.
- Strategy: Remove top two Liriodendron; replant 5 Sweet Chestnut as “antlers” to each side of axis. Gap planting (adjusted spacing) to complete pattern – 1 Liriodendron and 4 Sweet Chestnut.
- Options
 - layout/density/spacing:
 - species: +1 Liriodendron. +7 Sweet Chestnut. + 8 Sweet Chestnut (total 16 trees)
 - removals: 2 Liriodendron (TBA) and 1 Paulownia (sponsored, to be replaced elsewhere). Also side trim Liriodendron for axial view
 - timings: early / immediate
- Priority: 1
- Considerations for future continuation / management: Possible future removal of Liriodendron.
- New trees: 15.



View towards the Palace - the Liriodendrons begin to encroach, narrowing the avenue



Tree work has already been carried out to slightly reduce the crown and open up the view



The outer rows of Sweet Chestnut have established well



The inner row of Liriodendrons provide good autumn colour

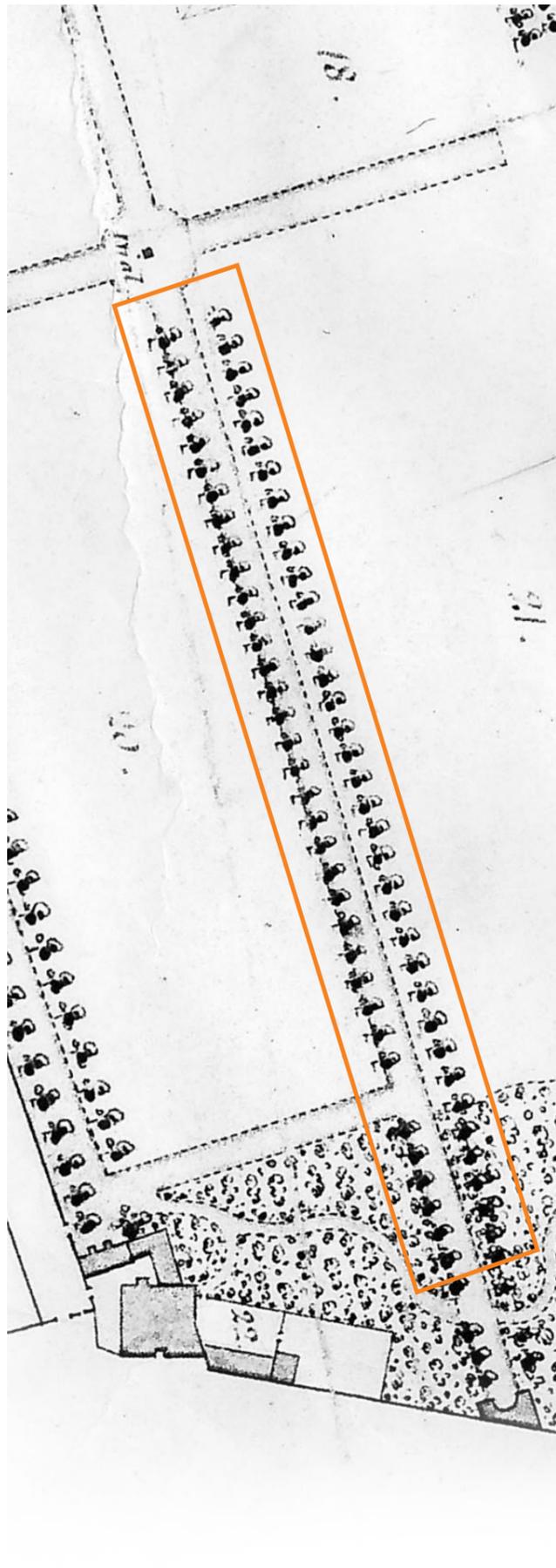


Fig. 12: The 1784 Forsythe plan shows an inner avenue of elm trees

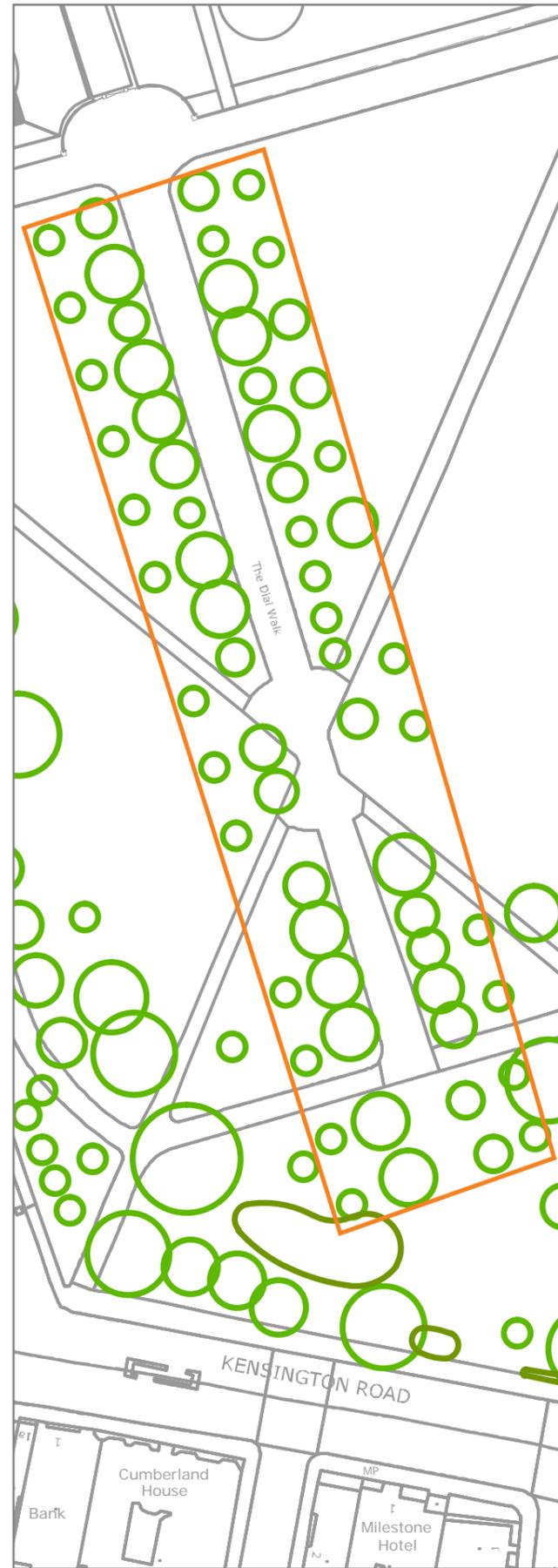


Fig. 13: Existing layout

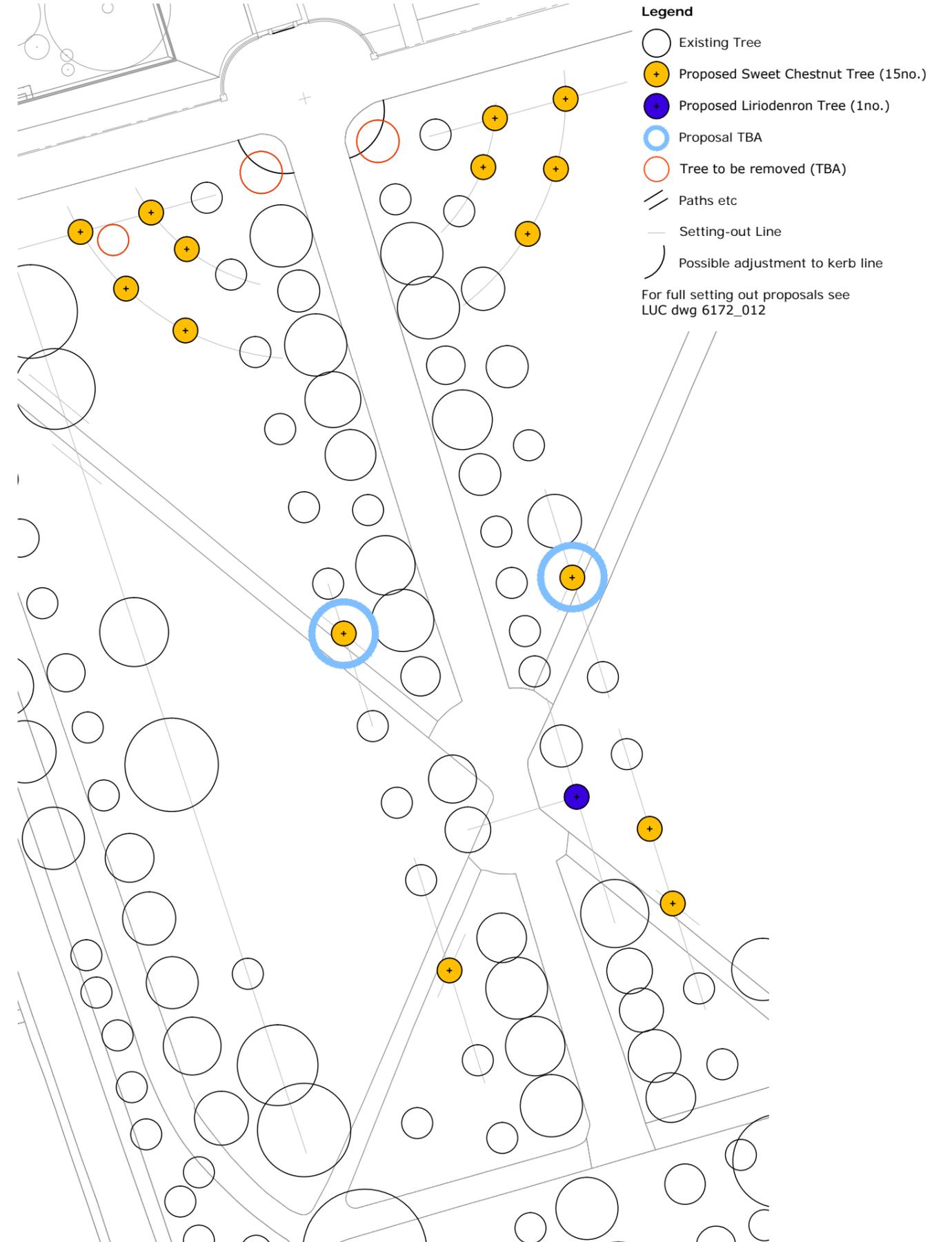


Fig. 14: Dials Walk proposals

8 The Dials – West Row

This single row of Horse Chestnut is important in providing some screening against the large mass of the Royal Kensington Hotel, immediately outside the gardens. However the line has suffered some losses; the remaining six Horse Chestnuts are vulnerable and have short left expectancy. There is a single, recently planted Liquidambar on-line; but 5 existing gaps remain with space for 1 at the northern end of the row.

The row is not in itself a historical Bridgeman line so the proposal is to plant here with *Nothofagus dombeyi* as a strong growing, interesting form to plug the gaps, continuing as and when the remaining Horse chestnuts have to be removed.

This would also be a good opportunity to replace a recently lost Mulberry tree on the adjacent Mulberry Walk - this is included in the proposals.

Details

- Name: Dials West
- Location: Single row to West of Dial Walk; East of Mulberry Walk
- Thumbnail history – as shown on
 - Bridgeman 1733: not shown as row of trees
 - Forsythe 1784: not shown as row of trees
 - OS 1870: not shown as row of trees
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving	Spacing (m)
Row	8	5 + 1 on end	61	Varies 15-25

- Issues / risks: mainly mature Horse chestnut with high risk / reduced life expectancy
- Strategy: Fill gaps and replace losses as and when
- Options
 - layout/density/spacing: preference to gap in-fill existing line (6 trees) as opposed to replanting offset line (10 trees)
 - setting out is designed for future in-filling (additional 6 trees) to create consistent spacing
 - species: *Nothofagus dombeyi* (Southern Beech) (or possibly *Zelkova* as alternative)
 - removals: Only as necessary for over-maturity
 - timings: Early
- Priority: 1
- Considerations for future continuation / management: Fill gaps as and when Horse Chestnut's have to be removed. Note replace one mulberry at North end of East line. Mulberry Walk.
- Total new trees: 7 (including 1 mulberry) now; plus 6 in the future.



Horse Chestnut is part of the Dials West row - beyond that is the Mulberry Avenue



Gaps in the row increase the visual dominance of the adjacent hotel



The existing Horse Chestnuts are in variable condition



The location of the missing Mulberry can be seen here



Fig. 15: The 1784 Forsythe plan shows that the row did not exist at this time



Fig. 16: Existing layout

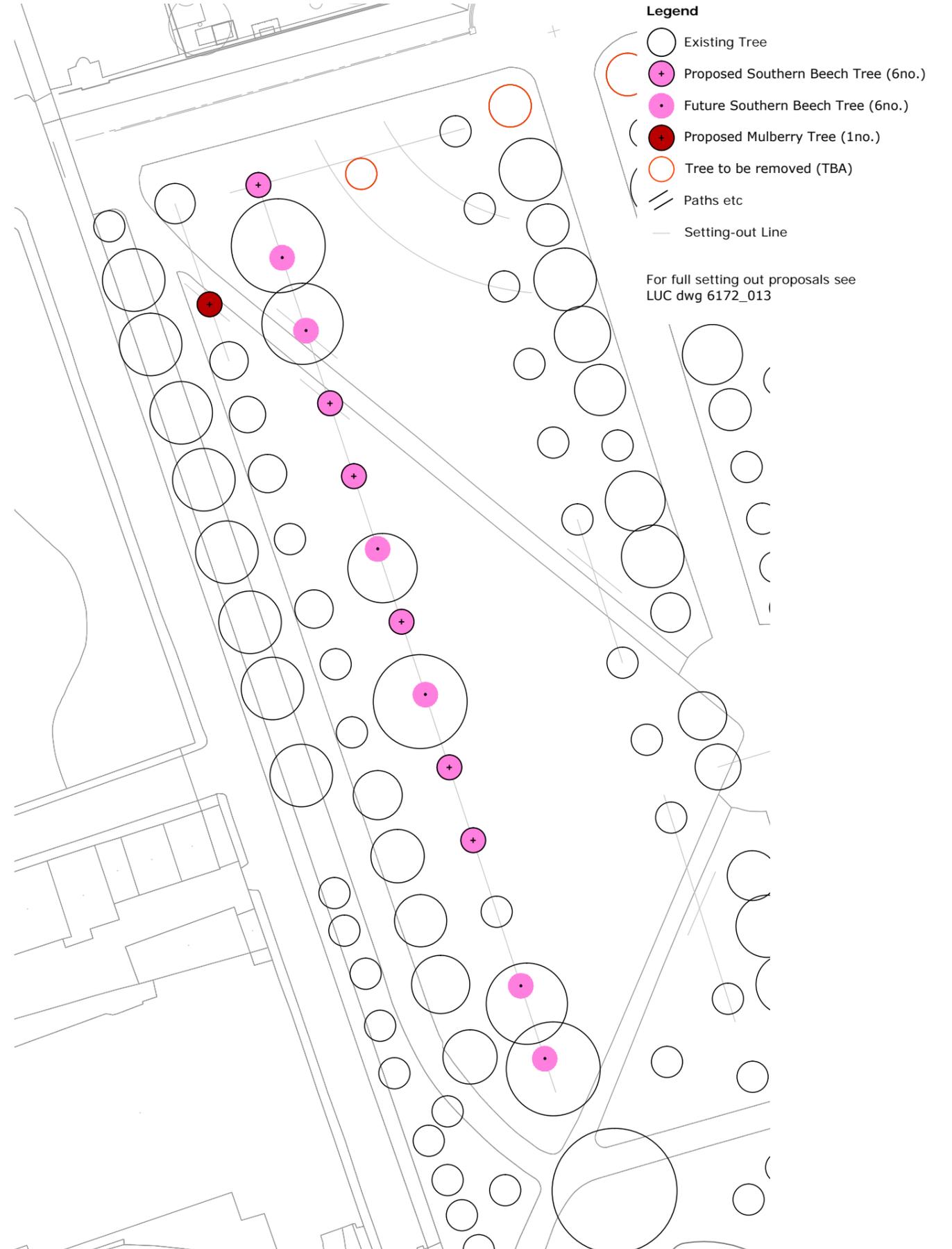


Fig. 17: The Dials West Row proposals

9 The Broad Walk

This is the largest of the avenues - 4 rows of trees (Norway Maple as inner rows; Limes as outer rows), 930m in length and nearly 60m width between the outer rows. It was originally laid out as part of Bridgeman's plan when the Gardens were extended eastward into (then) Hyde Park with 4 rows of elms planted in matching pairs. The last survivors were eventually felled in 1954 and replaced with 224 maples/limes in 1955. The limes are still more or less complete (4 gaps) but the maples have been thinned - roughly to the surviving alternate spacing after some earlier losses; and with subsequent losses over the last few years they now have a population of 46 against the original 112 (41% of original).

The options available here range from complete removal of the inner rows, to allow comprehensive replanting at even spacing and with an alternative species, to simple gap planting to make good the slightly eroded pattern of alternate maples with the continuing context of limes in good order.

Although it was previously anticipated that the maples would probably need to be removed in the short to medium term, as they were suffering significant squirrel damage - and indeed several trees were removed, further reducing the surviving pattern - opinion has now turned round to favour the medium-term retention of the what is a well-established if incomplete pattern of trees which are much admired seasonally for their autumn colour. They are still in reasonably strong formation at key top, middle and lower reference points, and are well supported by the continuous backdrop of limes.

Two options are therefore presented here, the **first** is to infill the 15 gaps formed by the missing maples to complete the "alternates" spacing and to retain the established and maturing maples for the reasonable life expectancy of the 1955 set (ie probably to about 2050). Although this denies a more faithful restoration to Bridgman's spacing, it will be least destructive and favour enjoyment of the trees which are now into early maturity.

However a further alternative was also tested, shown as the **second** option. This is also based on retaining the existing maples for their current life span; but in this case it starts the process of planting up the available gaps with oaks (*Quercus petraea*). Oak was chosen as the most suitable species following a team selection process that identified potential options and scored them on historical and locational appropriateness, strength as an avenue tree, ecological value, availability and ease of establishment.

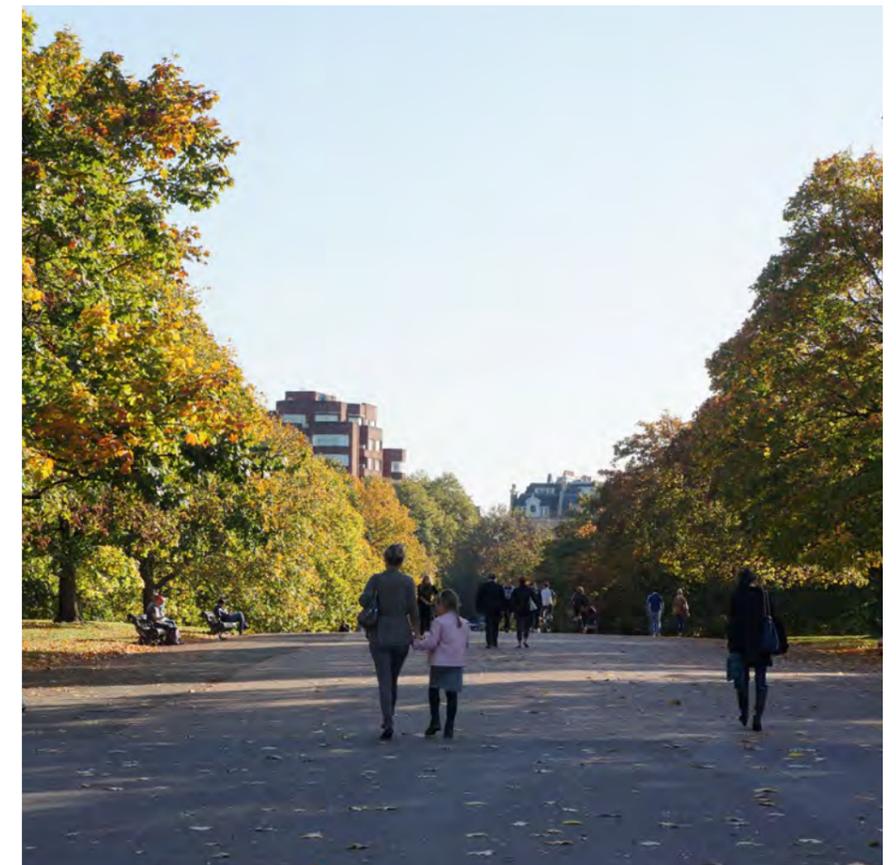
A further refinement in this option has been to consider the ultimate "regular" spacing of the oaks so that they form matching pairs - where possible - on each side of the Broad Walk. Surprisingly there are quite a number of "gaps" which can be taken up in this manner straight away; some are currently compromised by the retention of maturing maples, but overall the resultant pattern would be a positive and early investment in the next generation of trees and would still allow for a more complete pattern of oaks to replace the maples as further gaps develop in future years for succession.

Details

- Name: The Broad Walk
- Location: 4 rows of trees from Black Lion Gate to Palace Gate with a 130m gap to the eastern frontage of the Palace / Round Pond axis
- Thumbnail history – as shown on
 - Bridgeman 1733: 4 rows of trees in matching pairs
 - Forsythe 1784: 4 rows of trees
 - OS 1870: 4 rows of trees (Elms removed in 1954)
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving	Spacing (m)
Inner row, west	24	6	80% of thinned trees	approx 12m thinned to 24m
Inner row, east	22	9	70% of thinned trees	approx 12m thinned to 24m

- Issues / risks: squirrel damage, gaps and eventual degradation, currently majority of trees are in reasonable condition with 10 to 25 years expected life
- Strategy: infill gaps to provide a future generation of trees
- Option 1, Maples:
 - layout/density/spacing: approx 24m
 - species: Maple (*Acer platanoides*)
 - removals: Only as necessary for over-maturity
 - timings: can proceed but continue to review existing trees
- Option 2, Oaks:
 - layout/density/spacing: setting out is designed for precise spacing in pairs at approx 16m spacing with future in-filling
 - species: Sessile Oak (*Quercus petraea*)
 - removals: Only as necessary for over-maturity
 - timings: can proceed but continue to review existing trees
 - Priority: 2
- Considerations for future continuation / management: retain maples whilst in good condition, consider crown reduction to aid establishment of new adjacent trees
- Total new trees: 15 Maples or 53 Oaks initially with 37 in the future.



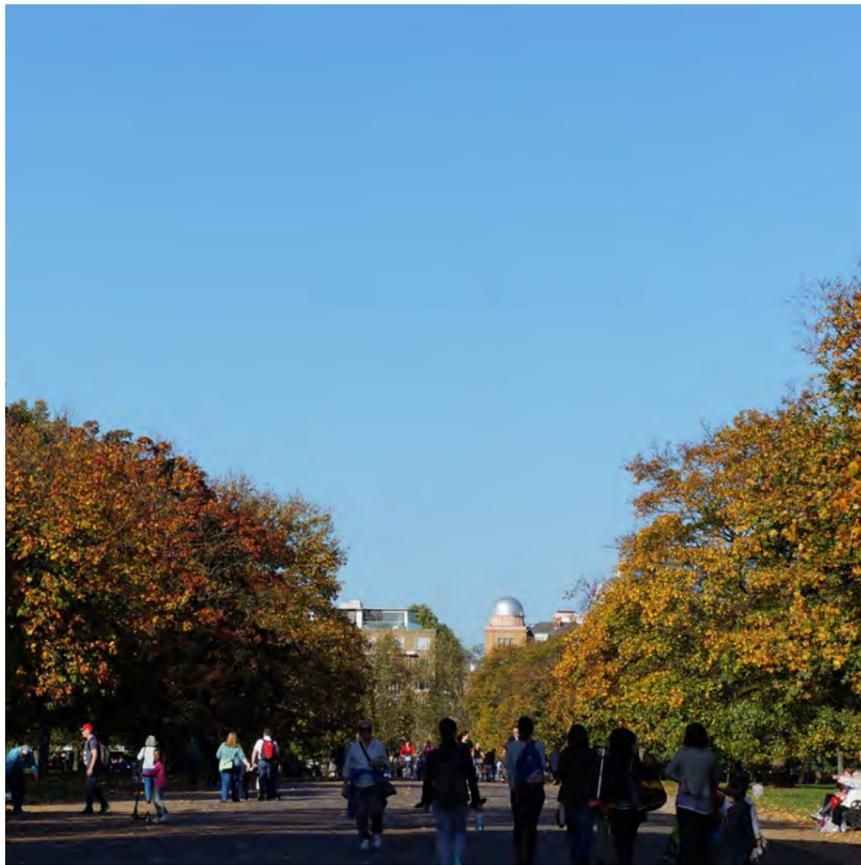
The Maples generally appear to provide a consistent avenue when view longitudinally



Maples provide good autumn colour



Some trees are in poor condition with less than 10 years expected life



Some gaps are more obvious

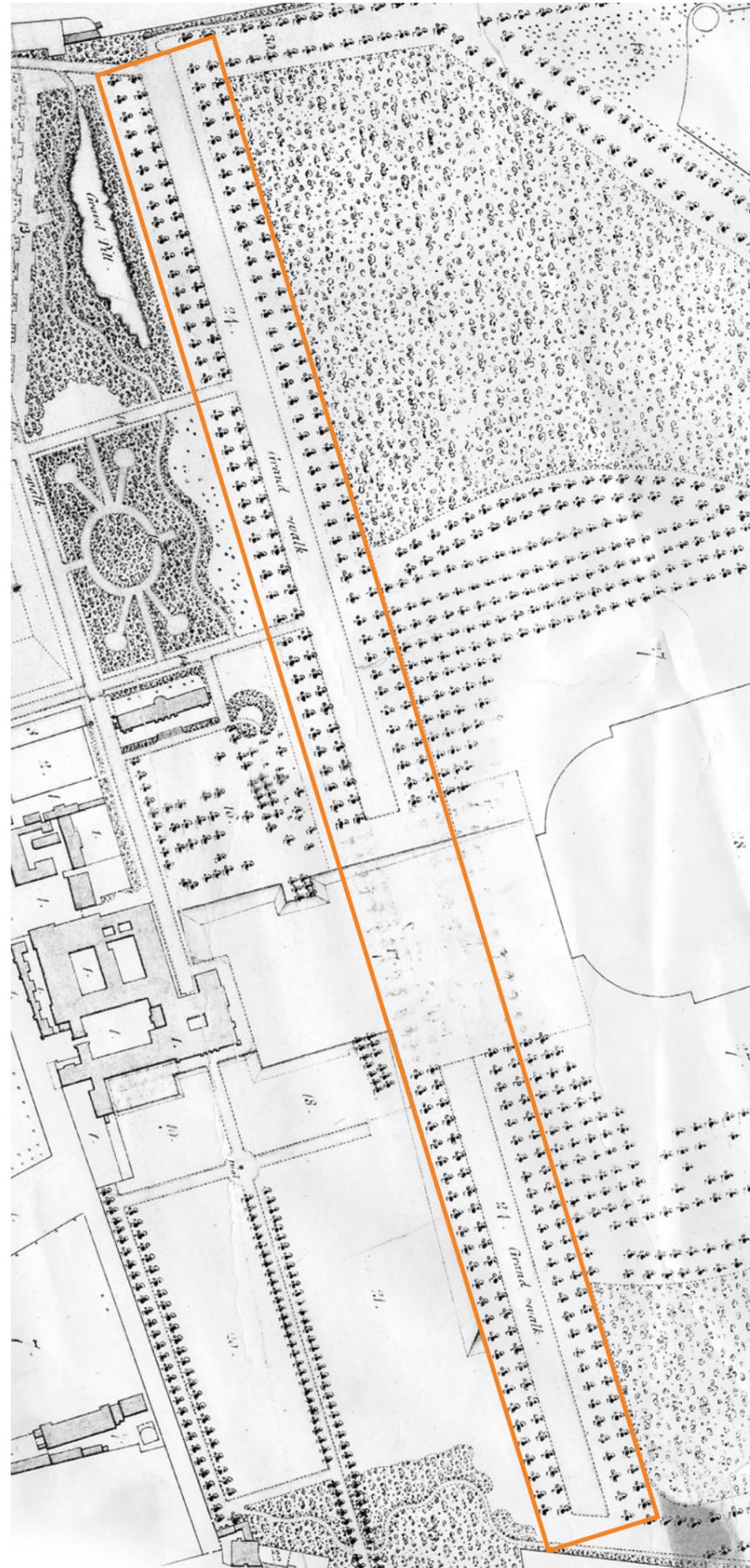


Fig. 18: The 1784 Forsythe plan shows the 4 rows of trees in matching pairs



Fig. 19: Existing layout

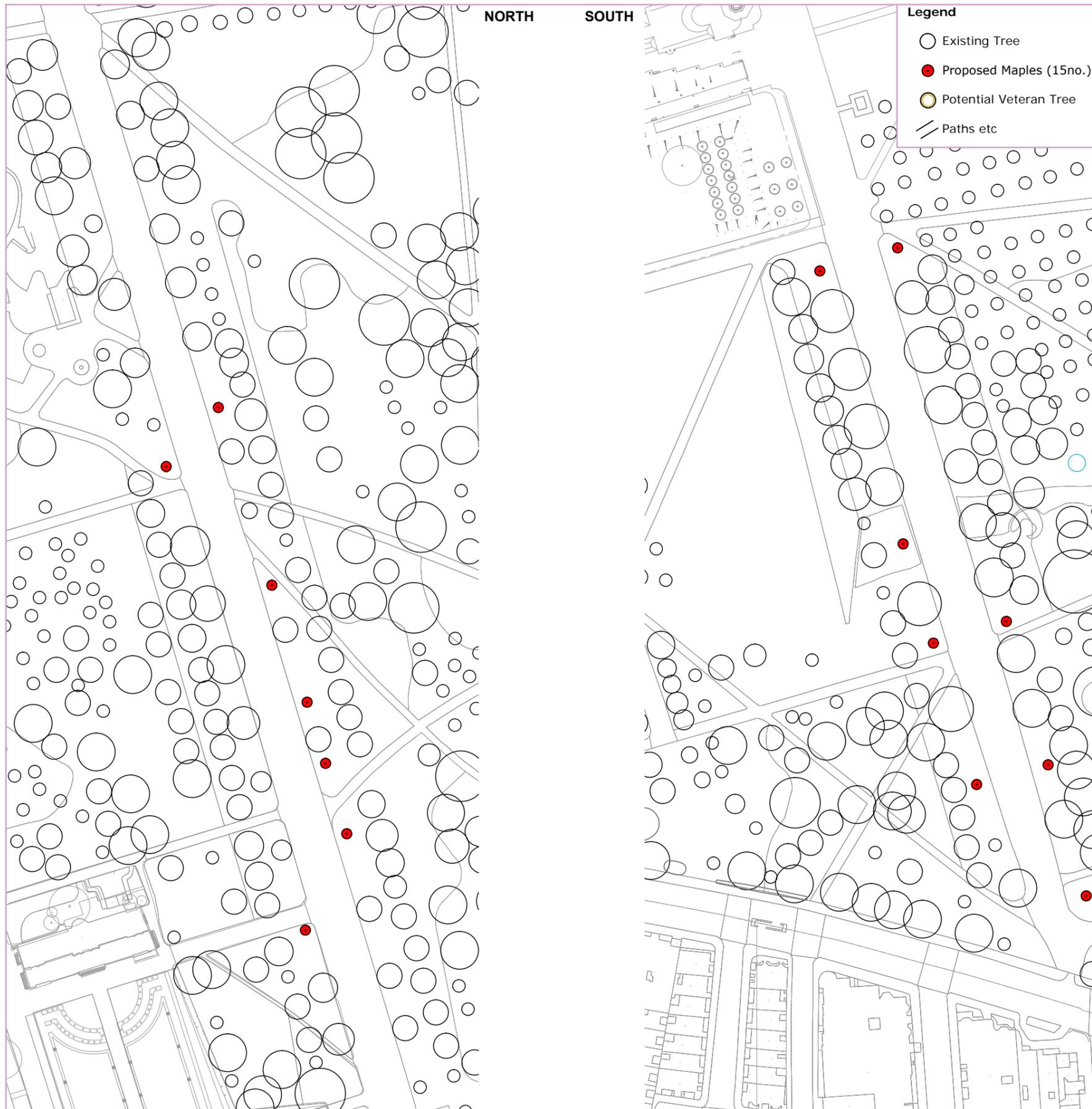


Fig. 20: Option 1 - Maples: - temporary infill of Maple gaps with new Maples (temporary solution)

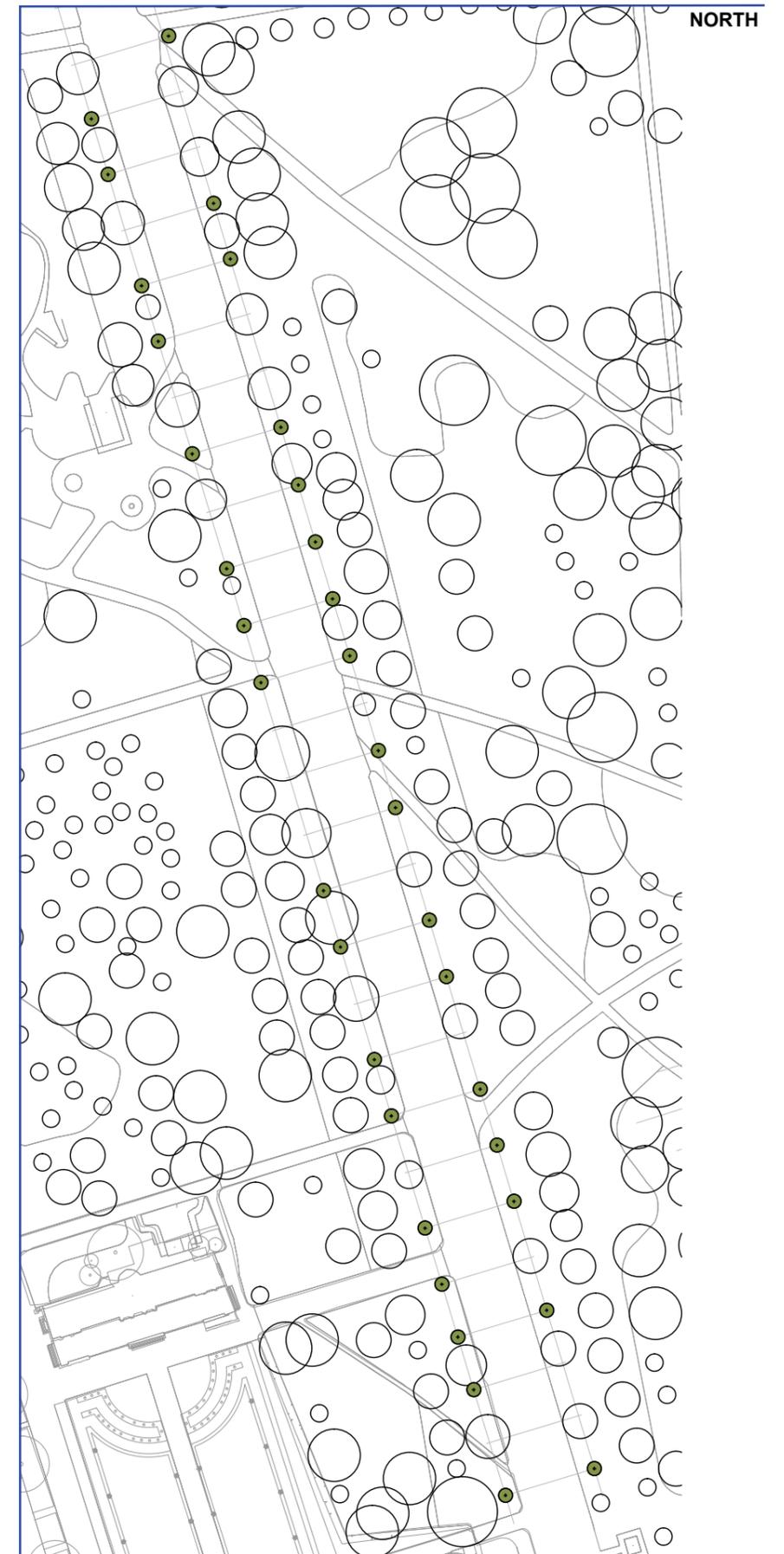
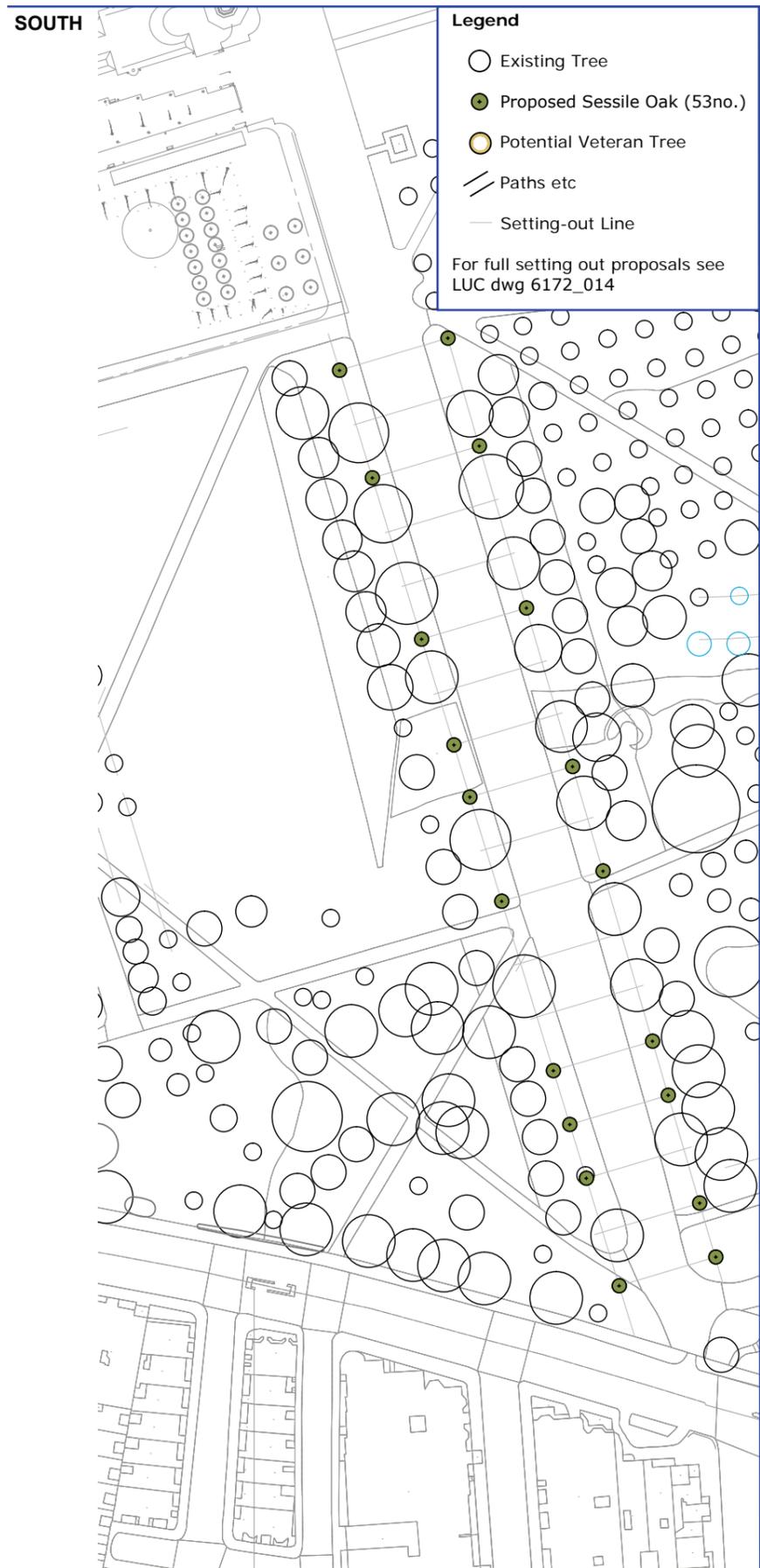


Fig. 21: Option 2 - Oaks: inter-plant between Maples where possible, following a strict alignment for a



well-spaced future avenue



Fig. 22: **Option 2 - Oaks**: long-term effect, after Maples have been replaced - creates a well-spaced avenue

10 Lancaster Gate Walk

Until the later 1990s this was the most impressive of the avenues in the Gardens, being strongly mature, with few gaps and forming one of the set pieces focussing on Physical Energy at the centre, the Albert Memorial to the South, and with the curiosity of the original southern leg of the avenue (pre Albert alignment) intersecting as the “spliced” line. These are tall and mainly well-formed trees which have great presence in the Gardens, albeit that they have suffered a number of losses in recent years as a combination of Anthracnose and soil exhaustion have taken their toll.

The avenues were replanted in the early 1860s, replacing the Bridgeman trees [probably elms] with planes, with outer rows of limes in the northern sector and deliberately replanting the original [spliced] line as more than just a memory. This is a cross avenue so the species sometimes [but not always] give way to the “patte d’oie” avenues where they intersect. Overall, taking the three Lancaster Gate avenues together (North, South and South spliced) there are 111 planes extant (66% of the full complement) with 55 gaps most of which could be replanted with plane. There are also 38 (54%) surviving limes in the outer rows which could also take up to 32 trees if all gaps were planted.

The consensus is that these are still fine trees forming an impressive set piece - despite the gaps - and every effort should be made to conserve the present population and to interplant where possible in runs with planes and limes respectively for succession. As the original spacing (average 10.5m) is relatively tight there is no point in single gap planting because of poor light / space in establishment; better to replant in runs of minimum 2 or preferably 3 gaps. In some cases the resultant gaps mean that adjusted spacing dimensions will be used (11.5 to 15m). The recommendations include replanting the “spliced” alignment as part of the historical set.

Details (North)

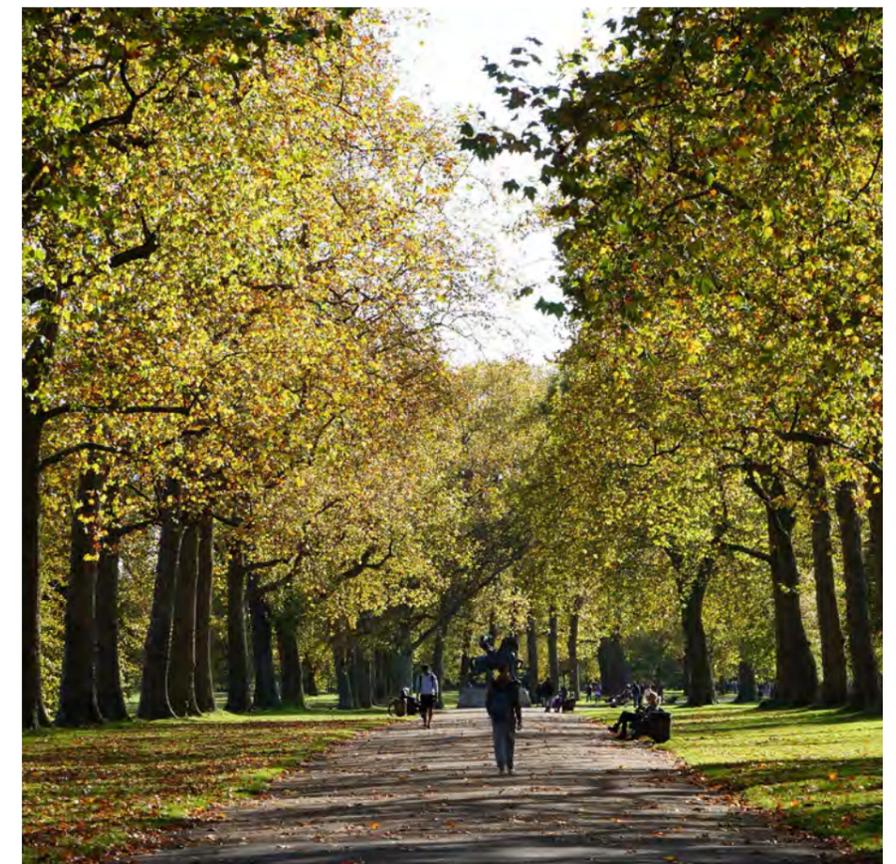
- Name: Lancaster Gate (North)
- Location: Northern run of main cross avenue to North side of Physical Energy composed of inner rows of planes and outer rows of limes
- Thumbnail history – as shown on
 - Bridgeman 1733: Shown as double avenue except at North East leg where truncated by boundary of Bayswater House Garden
 - Forsythe 1784: ditto but showing many losses on inner rows
 - OS 1870: Avenue (and new alignment further South to Albert) is shown well filled – as in Mann 1846, indicating that the planes were replanting c. 1820 and extended / realigned c. 1862 for Albert Memorial
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving
Plane E	23	12	66
Plane W	20	15	57
Lime E	15	20	42
Lime W	23	12	66

- Issues / risks: Plane increasingly affected by Anthracnose and further losses may be anticipated over next 10-20 years.
- Strategy: Subject to current monitoring trials, retain existing populations by management techniques, mulching etc. and replant gap runs where possible using plane: Ditto gap planting outer rows with lime as and when available in runs of min 2 trees.
- Options
 - layout/density/spacing: Gap planting
 - species: plane (inner rows); lime (outer rows)
 - removals: only where essential for health and safety or advanced disease
 - timings: can proceed now, but phased – next 5-10 years
- Priority: 2
- Considerations for future continuation / management: Continue monitoring / feedback and seek to maintain plus gap planting.
- New Trees here: 36 (Planes plus limes but avoid single gaps).



Looking north towards Lancaster Gate entrance



Looking south towards Physical Energy



Fig. 23: The 1784 Forsythe plan shows the Bayswater House Garden



Fig. 24: Existing layout (North Avenue)

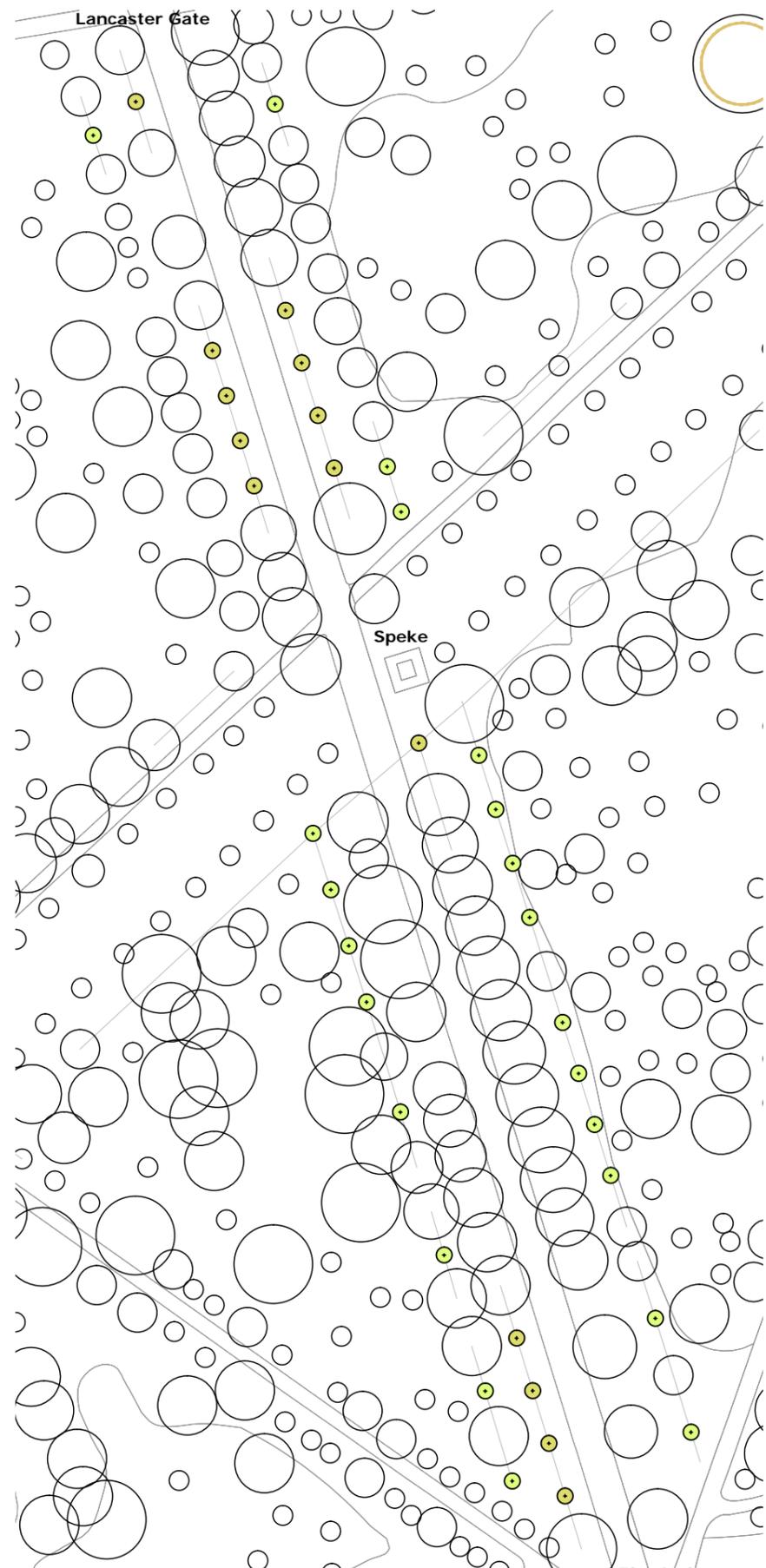


Fig. 25: Lancaster Gate Walk (North) proposals

Legend (North Avenue)

- Existing Tree
- Proposed Lime Tree (22no.)
- Proposed Plane Tree (14no.)
- Paths etc
- Setting-out Line

For full setting out proposals see LUC dwg 6172_015

Details (South Avenue)

- Name: Lancaster Gate Walk (South)
- Location: Cross avenue from Physical Energy south towards Albert Memorial
- Thumbnail history – as shown on
 - Bridgeman 1733: Double Avenue on original alignment (see “splice avenue”)
 - Forsythe 1784: ditto; much of inner avenue lost
 - OS 1870: Avenue shown on Albert alignment as “mature” but with gaps: no outer rows.
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving
East	19	8	70
West	21	6	77

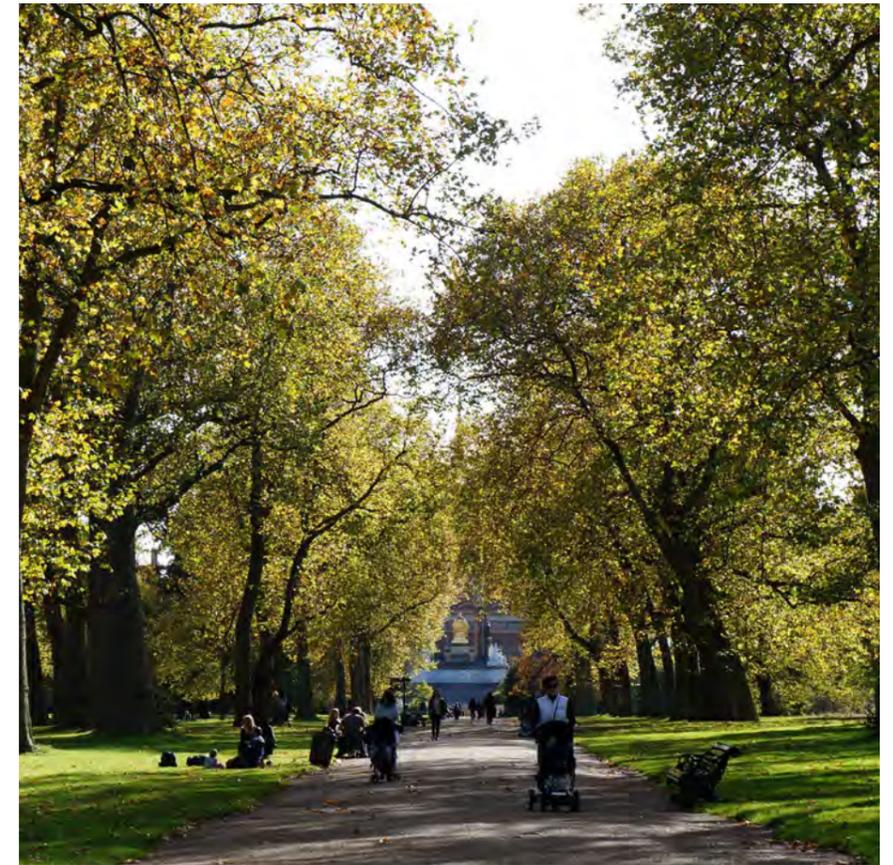
- Issues / risks: Recent deterioration / losses indicate further potential losses. However monitoring
- Strategy: Retain existing set as long as possible, informed by monitoring processes and management procedures. Gap plant as and when possible but only with runs of 2+ gaps (not singly).
- Options
 - layout/density/spacing: as existing
 - species: plane (inner rows); plane
 - removals: only as critically essential
 - timings: there are few opportunities as currently for gap planting
- Priority: 3
- Considerations for future continuation / management: informed by monitoring results
- New Trees here: 12.

Details (South Spline)

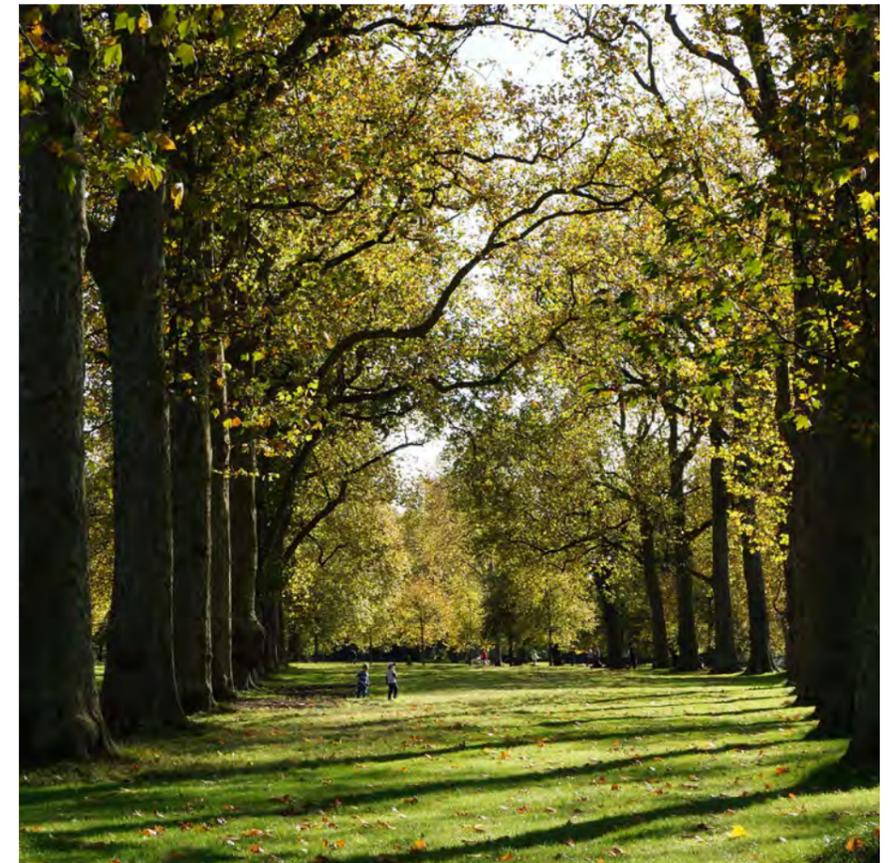
- Name: Lancaster Gate Walk – South Splice
- Location: original (pre Albert) alignment to South of Physical Energy
- Thumbnail history – as shown on
 - Bridgeman 1733: shown as double avenue
 - Forsythe 1784: shown as double avenue with substantial gaps
 - OS 1870: old alignment here retained; trees possible replaced 1830-40
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving
East	17	9	65
West	11	5	68

- Issues / risks: recent deterioration and losses
- Strategy: retaining as veterans and occasional gap planting as spaces allow to continue the “memory” of this avenue as part of Bridgeman’s layout
- Options
 - layout/density/spacing: as existing
 - species: plane (inner rows); plane
 - removals: only as critically essential
 - timings: gradual renewal of old pattern
- Priority: 3
- Considerations for future continuation / management: retain old trees through improved management / mulching etc.
- New Trees here: 10.



Looking south down South Avenue towards Albert Memorial



Looking south between the South Avenue and the Spline

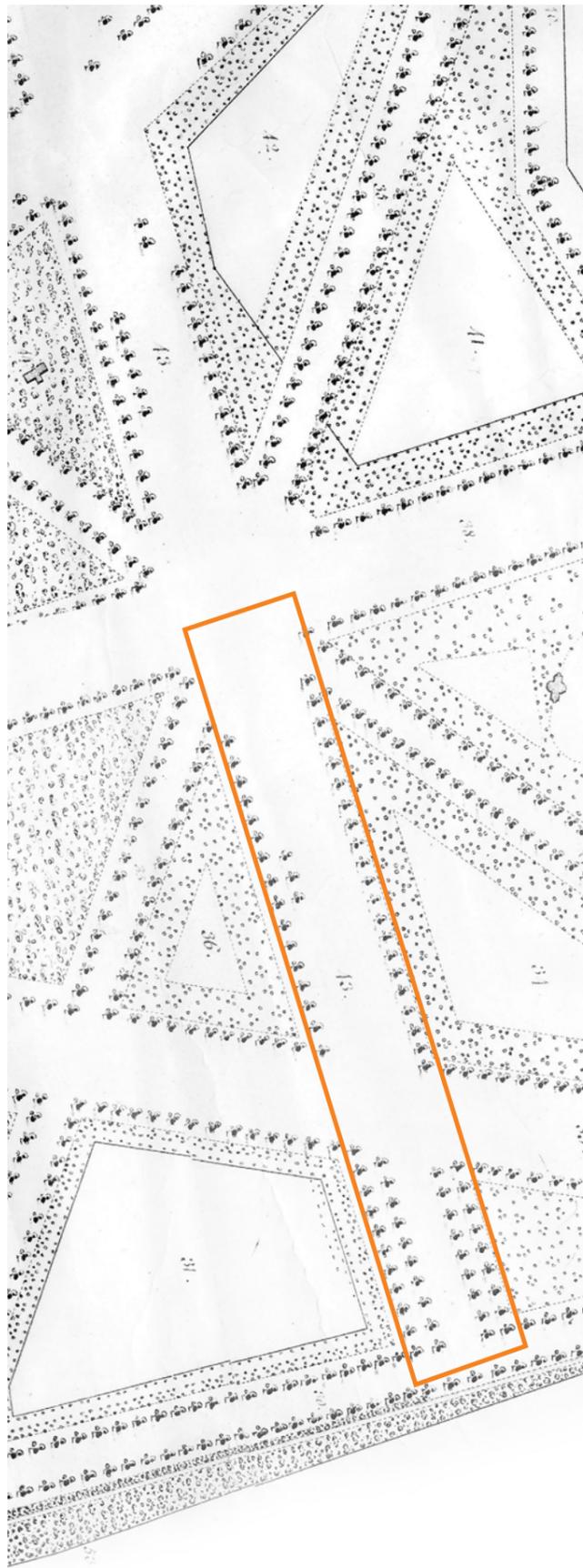


Fig. 26: The 1784 Forsythe plan shows the pre-Albert Memorial layout

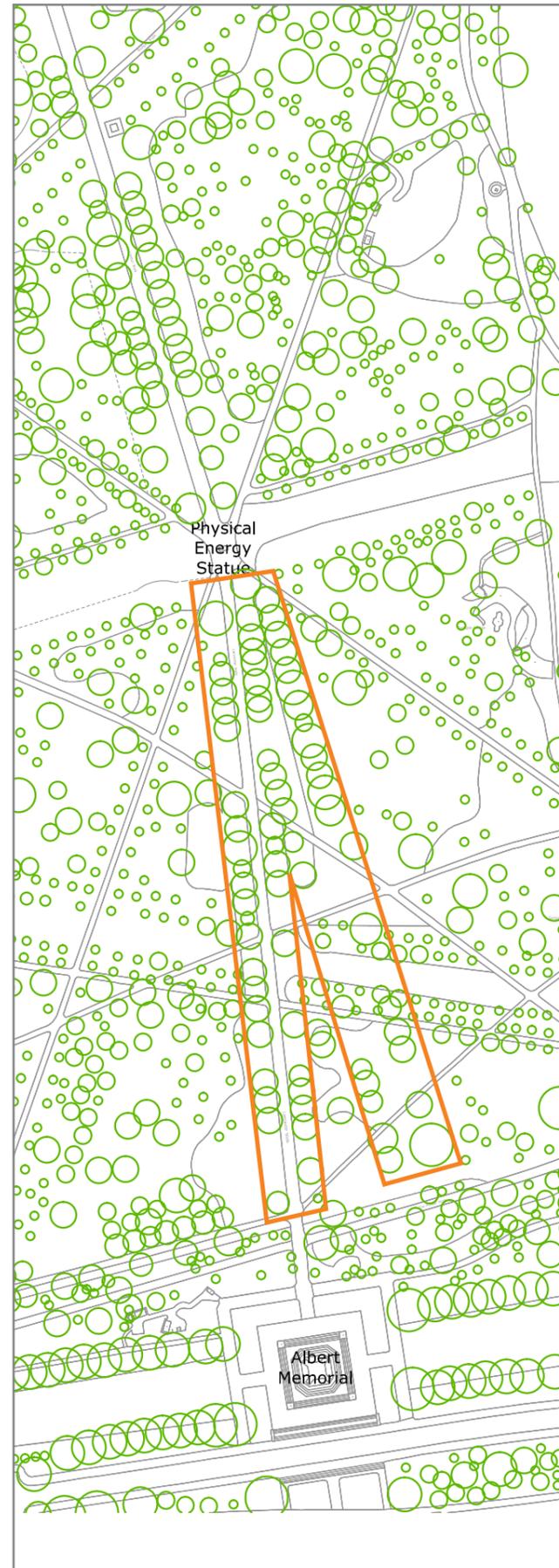


Fig. 27: Existing layout (South Avenue & Splice)

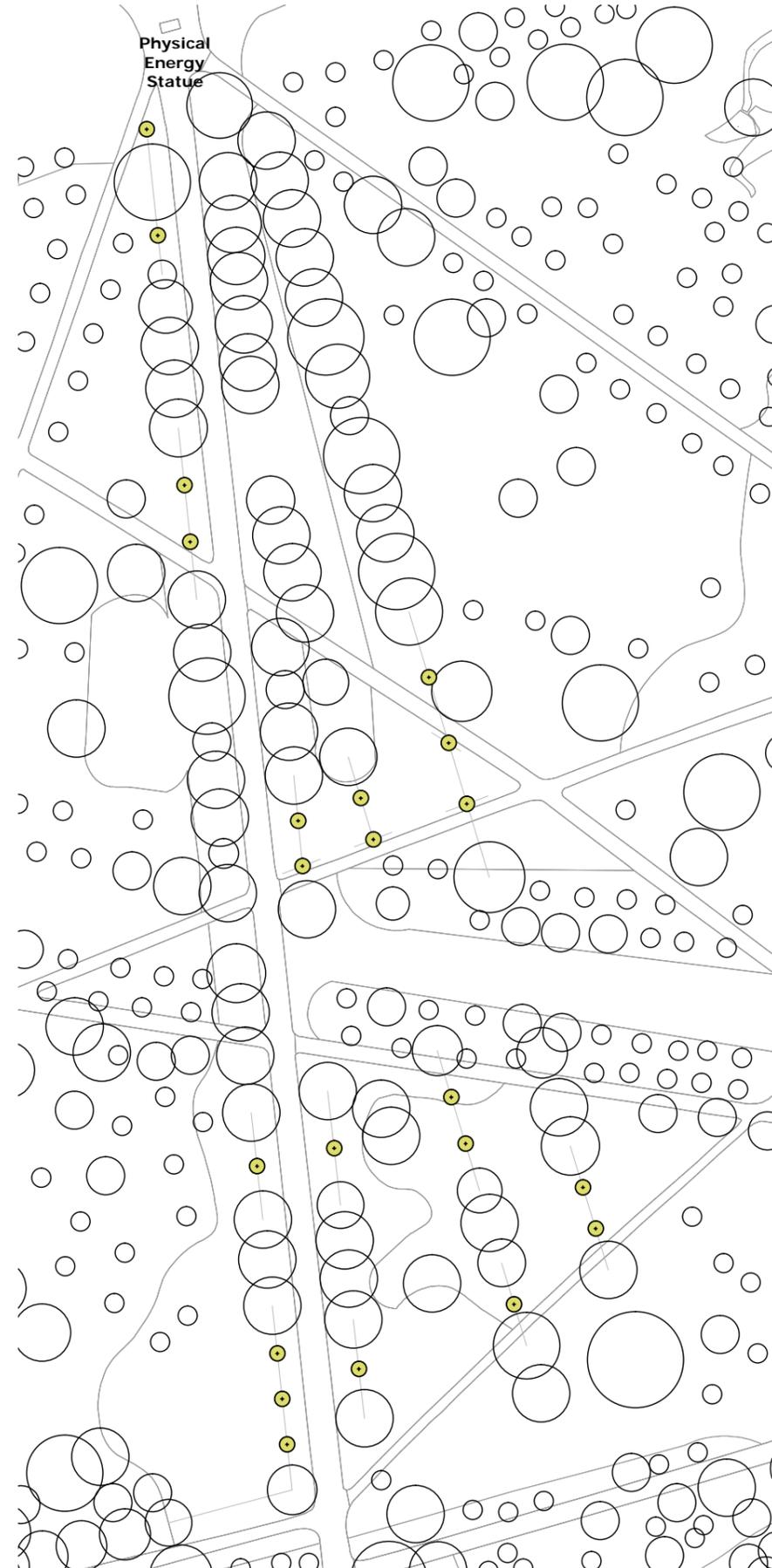


Fig. 28: Lancaster Gate Walk (South Avenue & Splice) proposals

Legend (South Avenue & Splice)

- Existing Tree
- Proposed Plane Tree (22no.)
- Paths etc
- Setting-out Line

For full setting out proposals see LUC
dwg 6172_015

11 The South Roundabout

So named on Forsythe's plans of 1784 and 1787, this was the framing avenue from the Bridgeman layout forming the southern boundary of the Gardens (until the Albert Memorial territories were brought in from Hyde Park in 1872) The South Roundabout formed a shaded walk linking the lower Broad Walk to the Mount and the South Bastion, close to the later position of Mount Gate. The present avenue of Horse Chestnuts appears to be a mid-nineteenth and early twentieth century replanting of Bridgeman's frame. It has suffered considerable losses, more particularly in the southern row which abuts the Flower Garden fence line and now reinforced with later tree planting at the back of the Flower Walk Borders. To the East side of the intersection with Lancaster Walk, the last of the Chestnuts was felled recently although several stump holes make can be recognised. Nevertheless the lack of continuing pattern in this sector (near the historical position of the Mount) is not itself wanting due to the presence of adjacent tree groups.

Spacing in the avenue appears to have been at 11.5m centres and there is one run of trees in the northern row, just to the East of its intersection with Hornbeam Walk, where this spacing still exists; it can also be detected in numerous tree bole holes where trees have been removed. However the more usual surviving spacing is as alternates at 23m, as at the western end. Survivors in the southern line are more erratic but the boundary is visually reinforced by other planting in the Flower Walk, and the few Horse Chestnuts remain as veterans - as long as they may survive.

Accordingly the strategy here is not one of urgency but it is to perpetuate the historic alignment by a combination of conserving the surviving stock for as long as possible and replanting judiciously with alternative species as space and condition allow. The ground here is damper than elsewhere and so, unusually for an avenue, could support and sustain alders and other *Aesculus* species (*flava*, *indica*) as well as providing arboricultural and ecological interest. Overall there is currently scope to replant some 20 trees to reinforce the rows [mainly the northern one] and retaining basic pattern rather than consolidated restoration.

Details

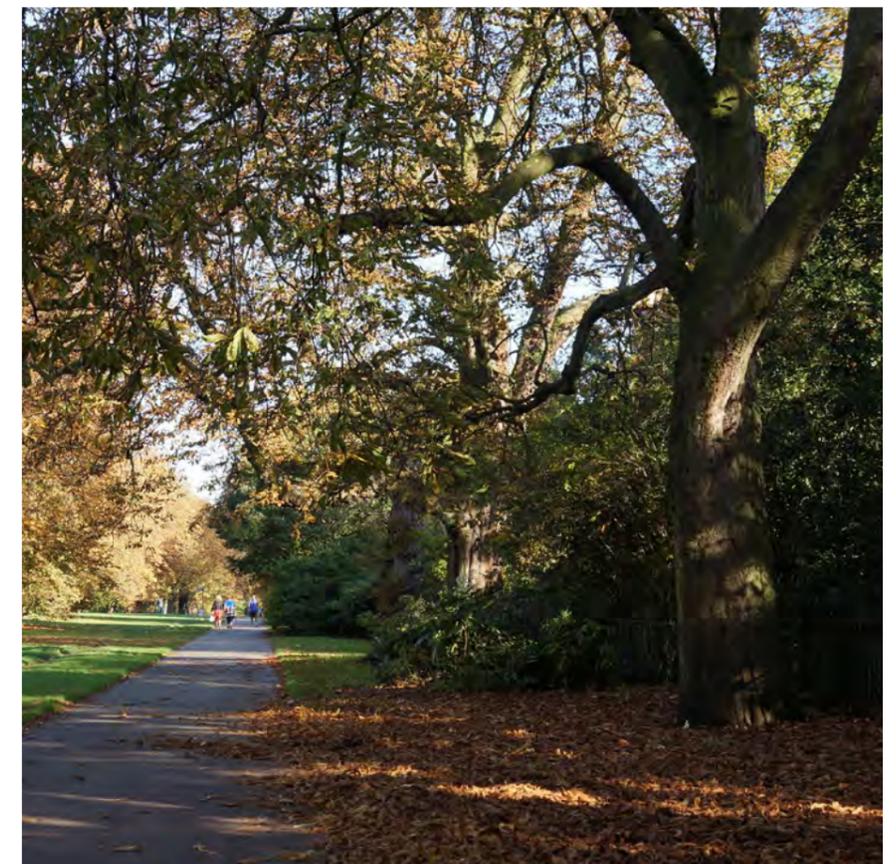
- Name: South Roundabout (West to East as far as Albert Memorial)
- Location: South boundary, immediately North of Flower Walk
- Thumbnail history – as shown on
 - Bridgeman 1733: main South boundary avenue leading from Broad Walk to Mount Gate
 - Forsythe 1784: Full avenue (no apparent losses)
 - OS 1870: evidence of 50% losses in South row; some recent replacements in North row
- Existing numbers surviving in this avenue: (originally spaced at 11.5m centres = total of 38 up to intersection of Lancaster Gate Walk, generally thinned to alternates (23m)

	Existing	Gaps	% surviving	Spacing
North	19	12	48	23m
South	12	3	30	

- Note: The southern line is affected by proximity of south Flower Walk fence and boundary planting which effectively forms the belt within which occasional avenue trees survive.
- 5. Issues / risks: HC – anticipated losses in next 5 to 25 years
- 6. Strategy: gap planting to continue North line; occasional gaps in South line. Retain all as long as possible.
- 7. Options
 - i) layout/density/spacing: 13-15m spacing on North line; as and where on South line
 - ii) species: necessarily avoid Horse Chestnut: Indian Horse Chestnut, Alder, Buckeye and Hop Hornbeam suggested for diversity
 - iii) removals: none
 - iv) timings: can proceed soon
- 8. Priority: 3
- 9. Considerations for future continuation / management: maintain old HC if possible.
- New trees: 15.



Horse Chestnuts along the north row



Trees along the south row stand amongst south Flower Walk planting

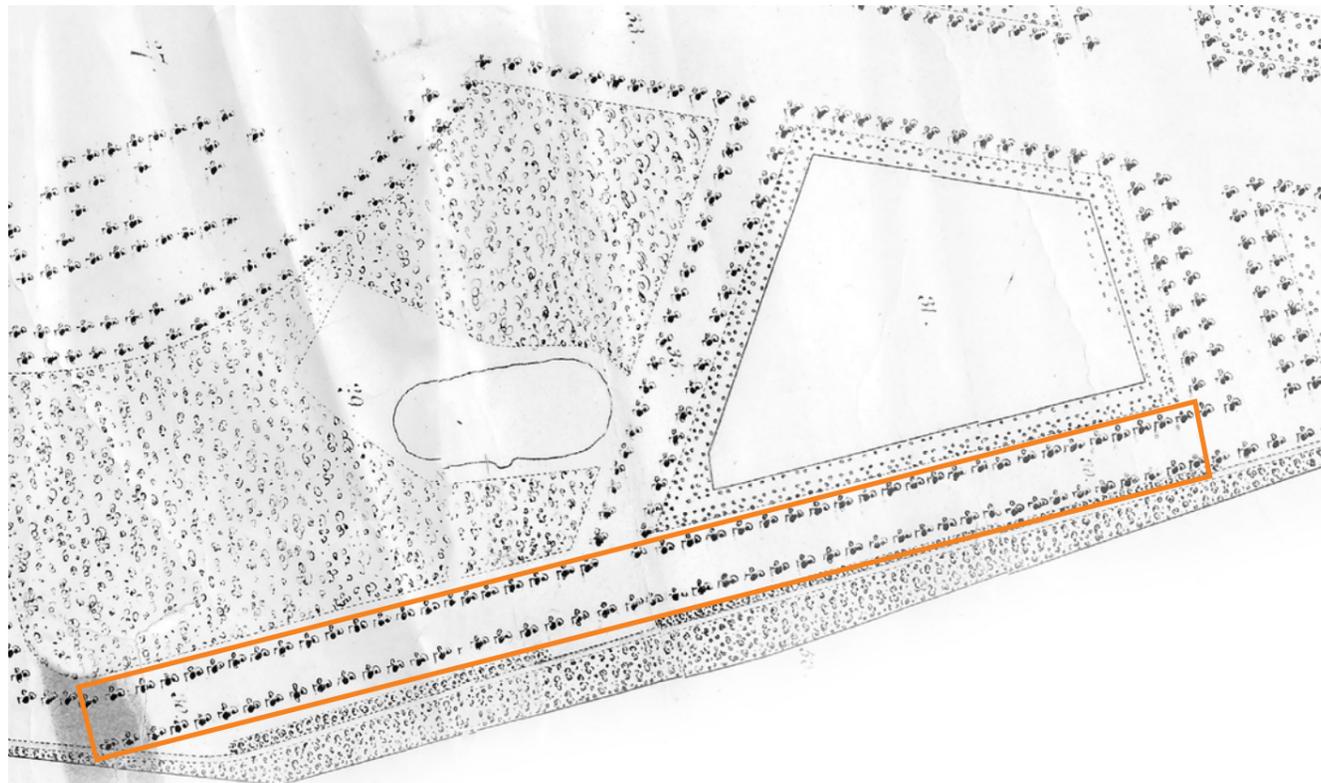


Fig. 29: The 1784 Forsythe plan shows a full avenue

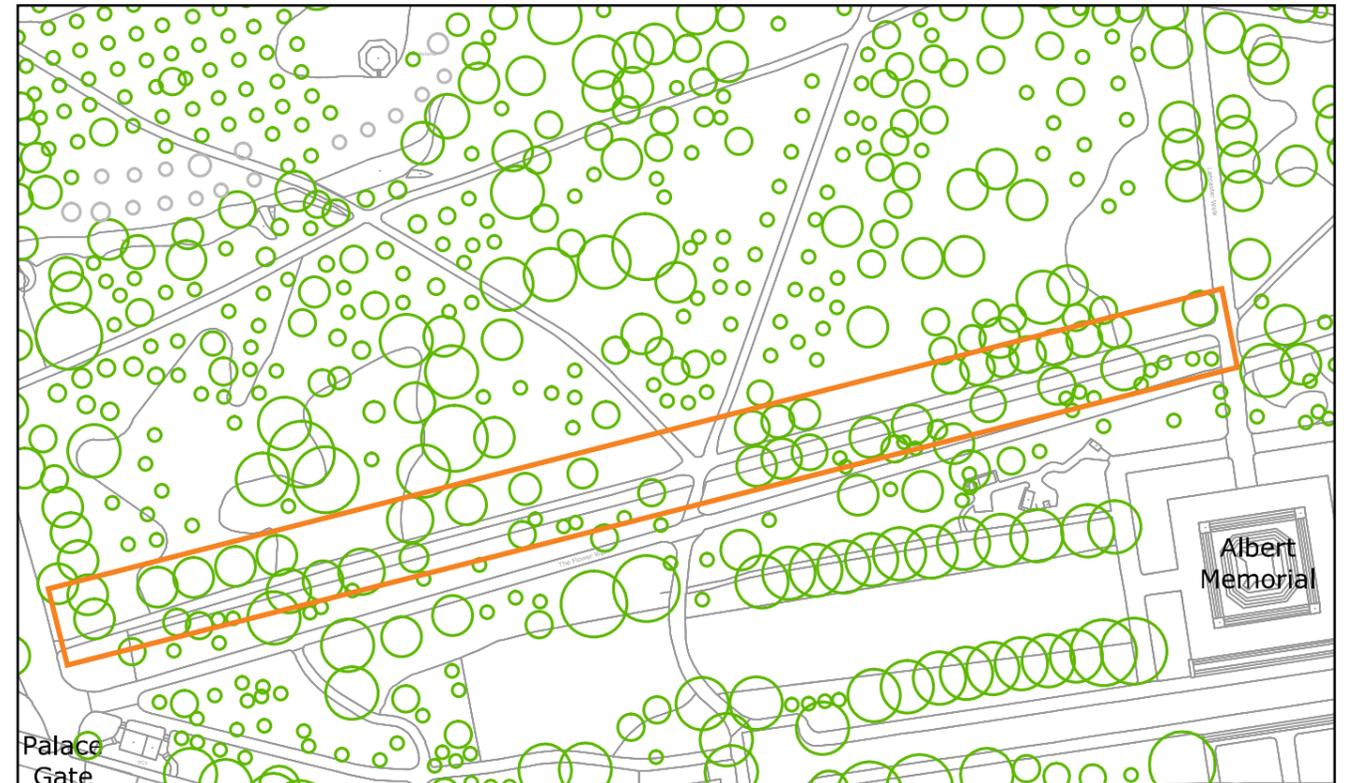


Fig. 30: Existing layout

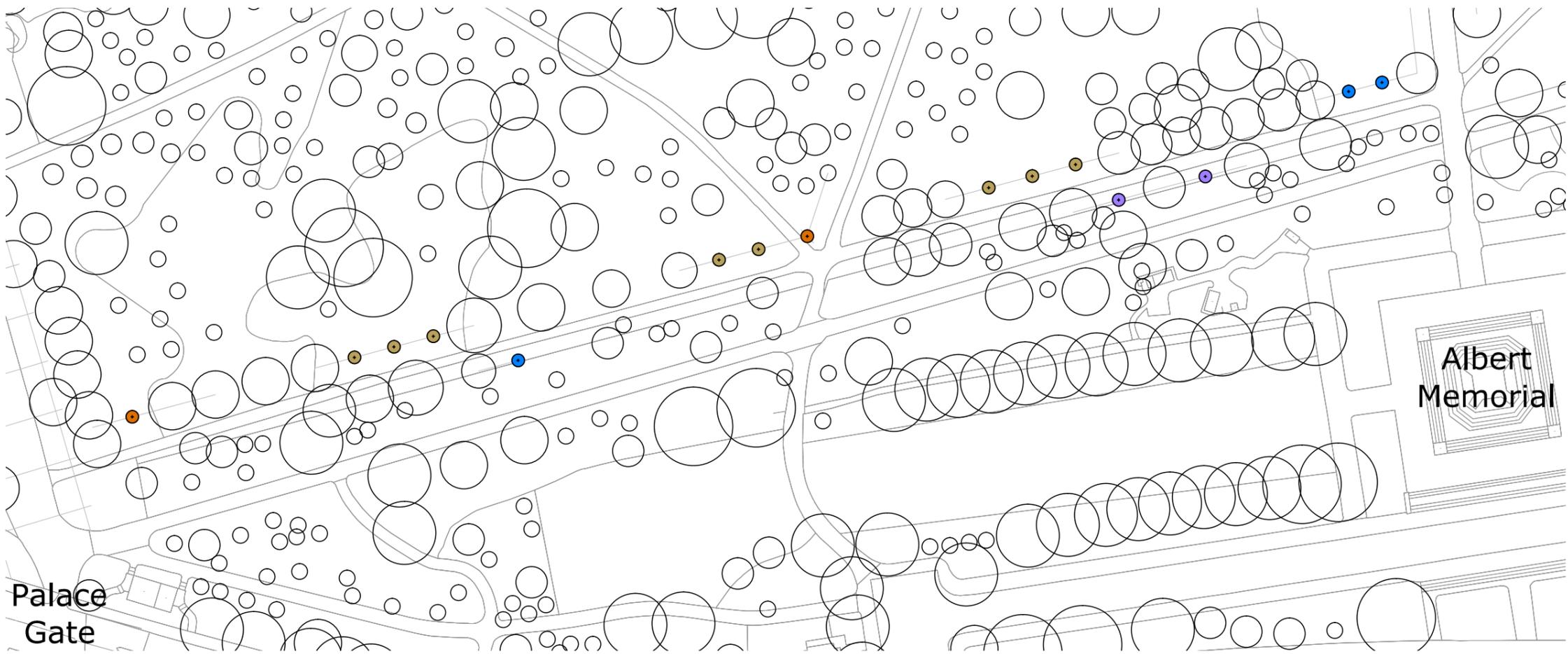


Fig. 31: South Roundabout proposals

Legend

- Existing Tree
- Proposed Alder Tree (8no.)
- Proposed Buckeye Tree (3no.)
- Proposed Hop Hornbeam (2no.)
- Proposed Indian Chestnut (2no.)
- Paths etc
- Setting-out Line

For full setting out proposals see LUC dwg 6172_016

12 Great Bayswater Avenue

Although initially the brief was to focus on the northern rows only, known as Budge's Walk, it was quickly concluded that the 4 rows - North and South of the ride - should be considered together.

The Avenue is shown in Bridgeman (1733) and in Forsythe (1787) as 4 rows of trees framing a grass ride and mirroring the Mount Walk to the South, with Front Walk forming the central axis of the "patte d'oie" focussed on the palace. The inner rows have been comprehensively replanted with Sweet Chestnut from late 1990s and are all but complete; The outer lines appear to be now fading components of second and some third generation replantings using mixed species - Horse Chestnut, plane, oak, lime in short runs but with many gaps. The northern (outer) row having 40% gaps and the southern row having 54% gaps, many of which might be replanted. As the gaps tend to occur in open runs rather than singly, substantial replanting (about 38 trees) would be possible to reinforce present populations, but bearing in mind that the remaining Horse Chestnuts (18) are likely to require removal in the shorter term so further replanting will then become necessary.

The fieldwork and review also flagged up 4 minor anomalies which had not previously been registered:

- the angles set by the two diagonal rides - Mount Walk and Great Bayswater Walk - are not exactly the same, leaving slightly different proportions for the Quarters they frame.
- at Great Bayswater Walk, the positioning of the Speke monument is not, as indicated in OS 1870, centrally placed but is now towards the southern side of the ride. This appears to indicate that the replanting of the southern row of Sweet Chestnut has in effect "leap-frogged" its original line into the ride.
- the impressive spire of St Mary Abbott's (lying behind and to the West of the Palace) sits on an axis defined by the northern side footpath of Budge's Walk, although it is also widely seen from the Great Bayswater Ride.
- a sight line from Speke to the spire passes directly through the statue of Queen Victoria.

For the replanting, and given that the inner rows of young Sweet Chestnut set a strong formality for the ride, it is appropriate to perpetuate variety on the outer rows. The progression of walking along Bridge's Walk is the more interesting because of the varieties in canopy and form. Thus the species palette - in short runs - includes oak, beech, black walnut and hornbeam.

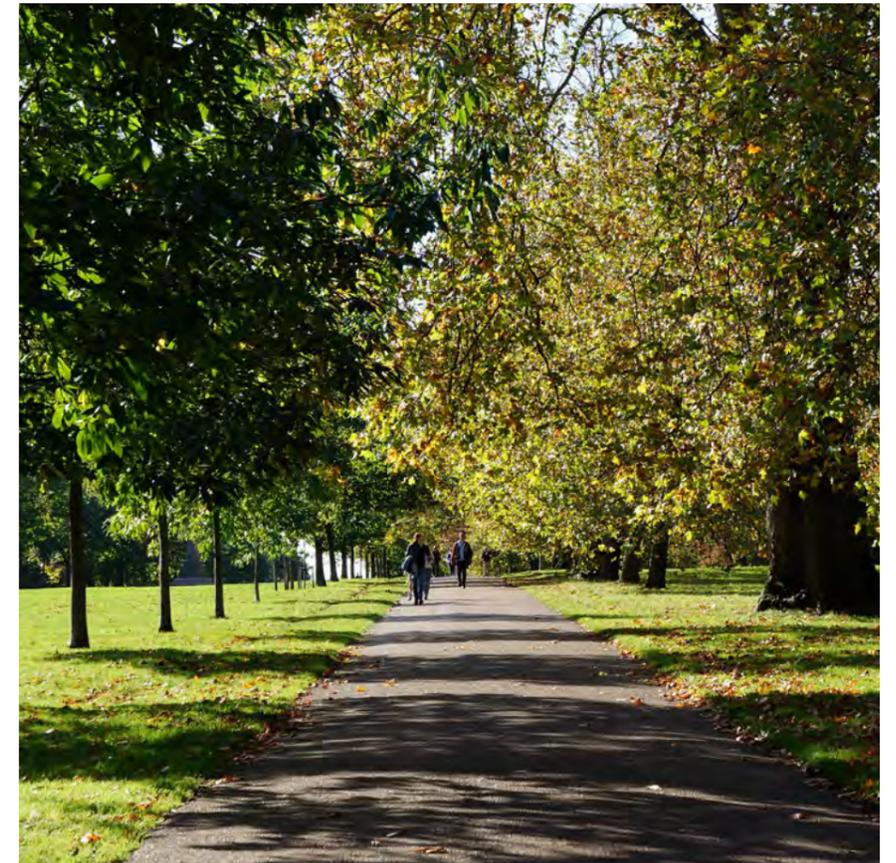
Details

- Name: Great Bayswater Walk
- Location: main North East axis of patte d'oie
- Thumbnail history - as shown on
 - Bridgeman 1733: originally as a double row of trees by Bridgeman but axis truncated at East end of enclosure of Bayswater House Garden
 - Forsythe 1784: shows some losses on inner avenues at East end: also report of "new planting" 1830
 - OS 1870: North side rows appear fairly complete; South row with extensive gaps: Speke sited centrally in axis.

- Existing numbers surviving in this avenue: (includes pairs at Great Bow)

	Existing	Gaps	% surviving	Spacing (m)
North	27	18	60	12
Mid North	45	-	100	12
Mid South	40	-	100	12
South	17	20	46	12

- Issues / risks: aging Horse Chestnut are 41% of mature outer rows
- Strategy: gap planting possible, mixed species favouring oak and lime
- Options:
 - layout/density/spacing: gap planting in runs - as available
 - species: oak and lime, occasional Sweet Chestnut; not HC; not plane.
 - removals: plane (inner rows); only as and when necessary
 - timings: early action at West end / North side (Bridge's Walk)
- Priority: 1 (SW end), 2 (central section) & 3 (NE end)
- Considerations for future continuation / management: Inner rows (all young) to be kept to full population; outer rows managed for longevity, allowing mix species but in runs of 5/6
- New trees: up to 30 (but omit single gaps) plus 4 possible locations shown for the future.



Looking south west down Budge's Walk



Looking south west towards Speke and St Mary Abbott's



Looking north east the outer row is clearly missing beyond the Sweet Chestnuts

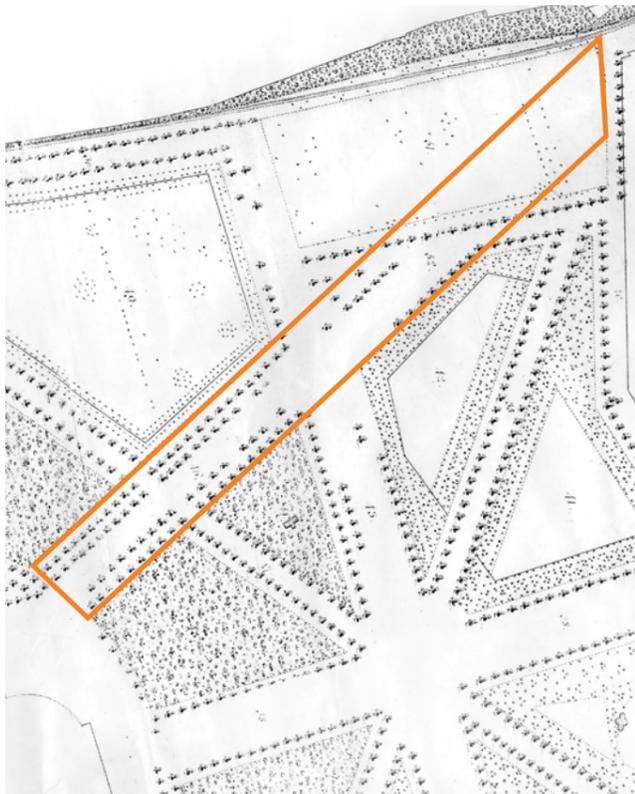


Fig. 32: The 1784 Forsythe plan shows the avenue truncated by Bayswater House Garden

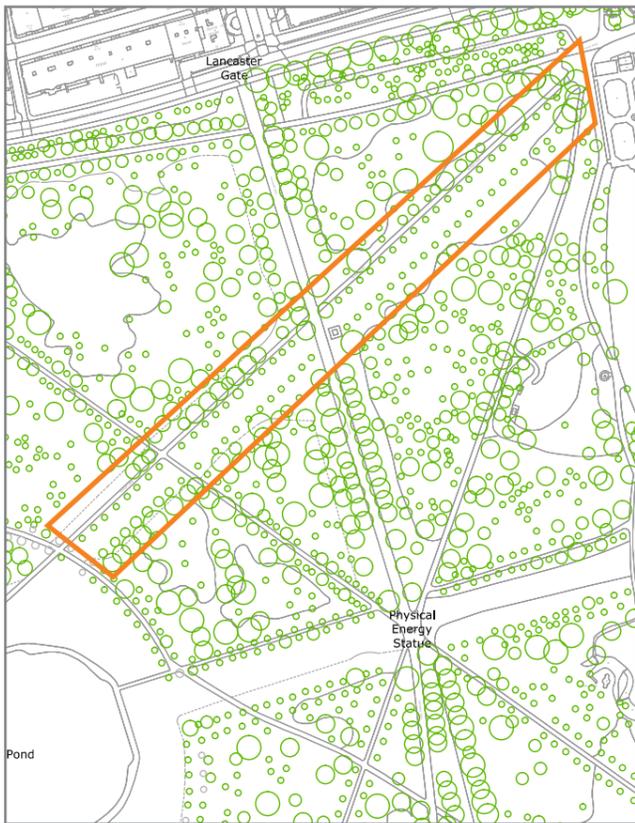


Fig. 33: Existing layout

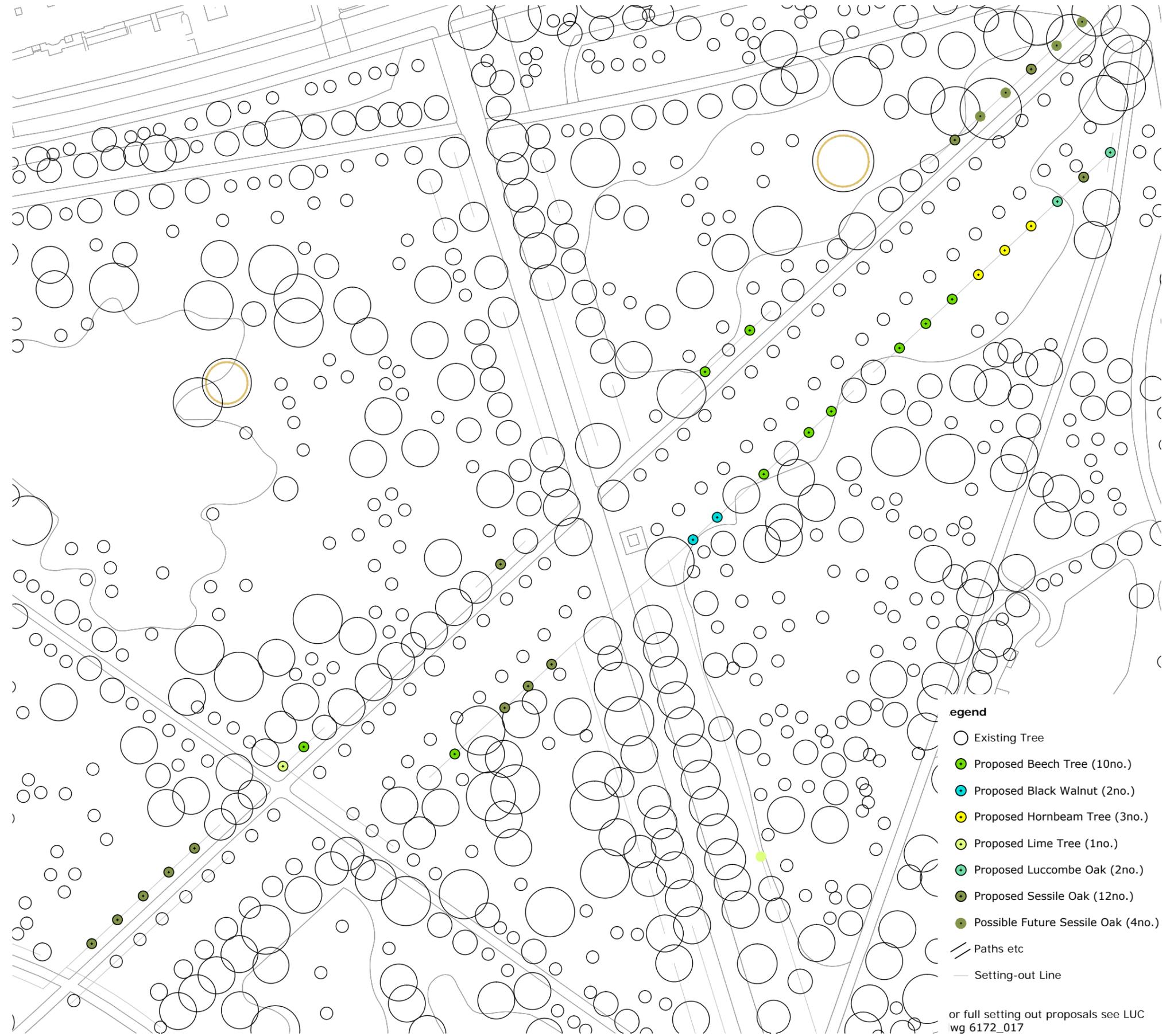


Fig. 34: Great Bayswater Avenue proposals

- legend**
- Existing Tree
 - Proposed Beech Tree (10no.)
 - Proposed Black Walnut (2no.)
 - Proposed Hornbeam Tree (3no.)
 - Proposed Lime Tree (1no.)
 - Proposed Luccombe Oak (2no.)
 - Proposed Sessile Oak (12no.)
 - Possible Future Sessile Oak (4no.)
 - Paths etc
 - Setting-out Line
- or full setting out proposals see LUC wg 6172_017

13 The North Feathers

This is a group of some 50 mainly mature trees which stand in formation - mostly aligned, but appearing - because of gaps and age differences - as informal parkland to the North side of the Round Pond. They reflect a similar more complete and more recently planted grid formation of lime trees across the South side of the Round Pond, and bear similarity to the layout shown on Bridgeman's plans. They are however second (and some third) generation, many having been replanted in the latter part of the nineteenth century and now providing a pleasant parkland feel with formal echoes of alignment, a predominance of oak (60%) but with Horse Chestnut, Plane, Sweet Chestnut, Poplar and Lime present.

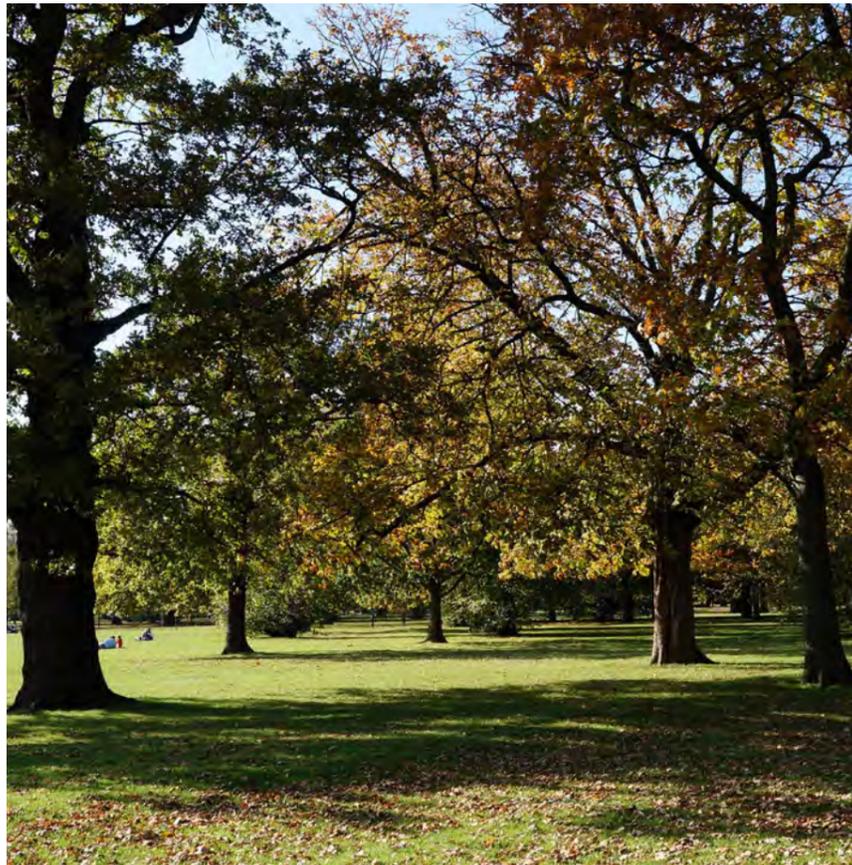
There are a number of gaps approximating to the original grid which could be planted, but there is no great urgency to do so. Therefore discretion should be used in the timing of these plantings. There is however an opportunity to reinforce the southern row along the outer face. Stump hole evidence suggests that Bridgeman's southern row possibly lay some 6m South of the now incomplete but mature "line". Again it is proposed to perpetuate the mix but retaining a majority of Oak, including *Quercus petraea*, with Beech, Sweet Chestnut, Lime and Hornbeam.

Details

- Name: North Feathers
- Location: North side of Round Pond
- Thumbnail history – as shown on:
 - Bridgeman 1733: Shown as formal East / West lines and tying into the "slips" at Broad Walk
 - Forsythe 1784: Still largely intact although South Feathers appear to have suffered c. 40% losses
 - OS 1870: still shown as formal lines, though interplanting may have commenced c. 1990
- Existing numbers surviving in this avenue: Mixed species

	Existing	Gaps	% surviving
Group combined	52	16	70
Front row	-	7	-

- Issues / risks: Predominately oak with 5 Horse Chestnut, 10 lime etc; reasonably well diversified
- Strategy: Conserve, despite loss of some lines; several candidates for veteran tree status (oak, sweet chestnut)
- Options
 - layout/density/spacing: a) some infill (16 possible without losing parkland feel but also b) option of restore front (s) line. (7 possible)
 - species: Oak, hornbeam, beech, sweet chestnut
 - removals: none
 - timings: available but not urgent
- Priority: 3
- Considerations for future continuation / management:
- New trees: 23 (assuming front row also planted).



The grid alignment is not obvious from all angles



The majority of trees within the North Feathers are of the same age class



The North Feathers provide a good edge to the Round Pond



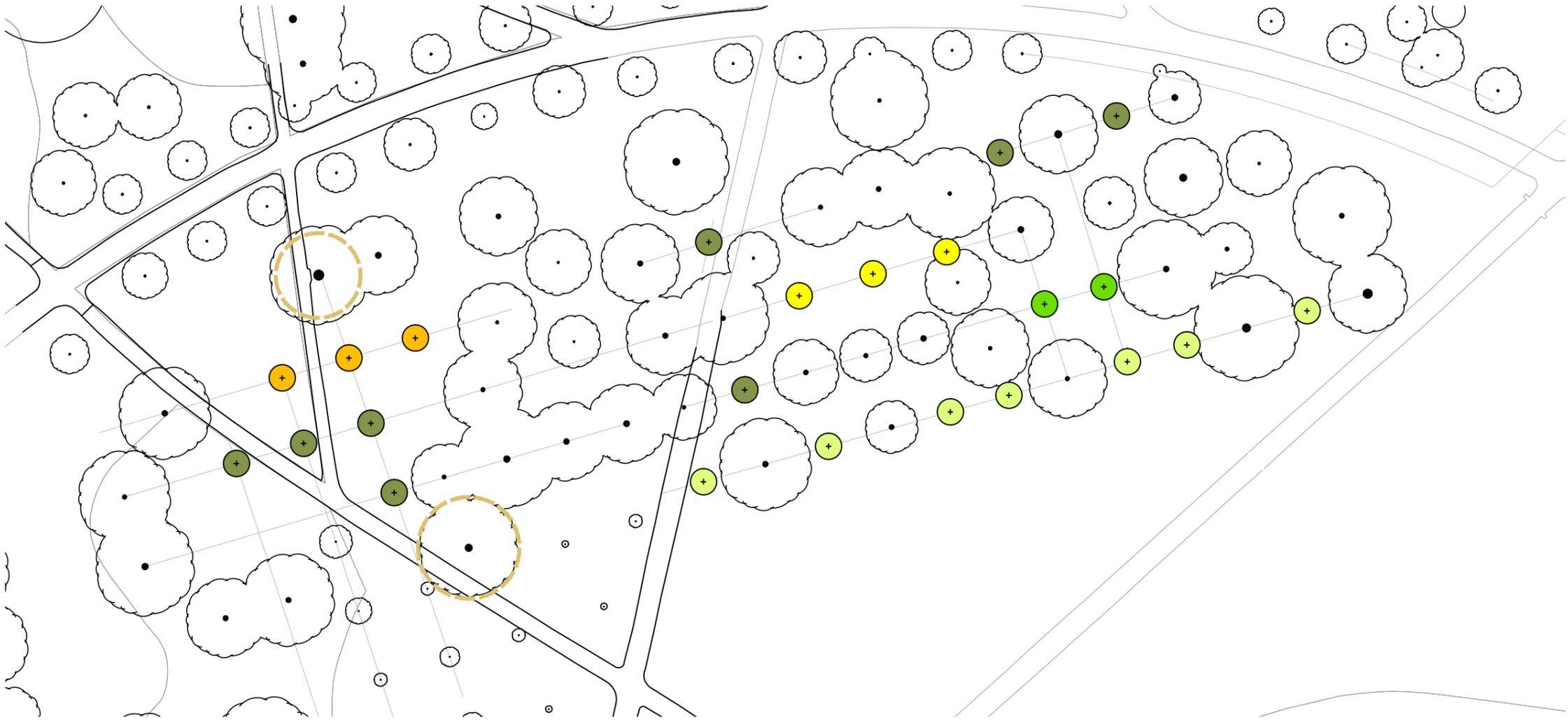
Species include Oak and Lime



Fig. 35: The 1784 Forsythe plan shows the North Feathers as a formal grid



Fig. 36: Existing layout



- Legend**
- Existing Tree
 - Proposed Beech Tree (2no.)
 - Proposed Hornbeam Tree (3no.)
 - Proposed Lime Tree (7no.)
 - Proposed Sessile Oak Tree (8no.)
 - Proposed Sweet Chestnut (3no.)
 - Potential Veteran Tree
 - Paths etc
 - Setting-out Line

For full setting out proposals see LUC dwg 6172_018

Fig. 37: The North Feathers proposals

14 Buckhill Walk and Axis

An avenue is shown on the historic plans from Bridgeman etc. following the eastern boundary of the Gardens from Westbourne Gate to Magazine Gate via the North and Middle Bastions. This had all but disappeared by the early twentieth century but incremental planting has occurred in mixed species and in short runs along either side of the path. In its present form it is hardly an avenue as it is discontinuous, but there is an echo of its former completeness; and the expression of the North Bastion and a short section of (in-filled) ha-ha are reminders that this was part of the Bridgeman layout, not just a latter day appendage from Hyde Park.

It is therefore reasonable to consider supplementing the planting to make the avenue at least more present, but not necessarily emphatically complete. It is proposed to continue planting here, recognising the mixed age structure and species variation, and continuing in similar manner. Perhaps of greater importance to the historic pattern is the need to plant a small number of “parkland” trees to provide long term succession for the frame of Front Walk as it follows the Palace axis eastward up the slope of Buck Hill. This is currently provided by two small groups of veteran and noble limes which sit informally on the flanks of the meadow but, when seen from the main Gardens, still echo the Front Walk “frame” at Buck Hill. Fortunately there is space - without significant intrusion - to plant up to a dozen trees on the edge of the meadow in carefully defined positions to continue this effect for when the mature limes eventually disappear.

Details

- Name: Buckhill Walk & axis
- Location: Trees flanking existing roadway / path from Westbourne Gate to Magazine Gate at near eastern perimeter framework.
- Thumbnail history – as shown on:
 - Bridgeman 1733: Formal avenue punctuated at North and Middle Bastions and with Front Walk framing lines.
 - Forsythe 1784: Ditto but with some losses in southern leg and informal / parkland at Front Walk
 - OS 1870: Ditto; showing a few gaps as original stock ages.
- Existing numbers surviving in this avenue:

	Existing	Gaps	% surviving
West	26	17	60
East	35	15	70

- Issues / risks: Mainly relatively recent (30yrs) planting, of mixed species
- Strategy: This is no longer an emphatic Bridgeman avenue although it conveniently reflects the memory. Some gap planting (mixed species in short runs), would help reconstruct - but not trying to be wholly formal.
- Options
 - layout/density/spacing: gap planting, leave “Front Walk” vista open
 - species: mixed in groups of 2+
 - timings: Available but not urgent
- Priority: Buckhill axis 2, Buckhill Walk 3
- Considerations for future continuation / management: Also plant a loose parkland groups (8 plus 5) on each side of the axial frame of Front Walk to provide continuity for future loss of veteran limes which do this job at present. There are a number of veteran trees in this vicinity – including one Sweet Chestnut on the North Bastion; high priorities for continuing conservation.
- New trees: 24 in avenue plus 13 in frame.



At the south end the avenue is still well-formed



Further north the avenue has several large gaps



The trees framing Front Walk are of all of a similar age



Fig. 38: The 1784 Forsythe plan shows the presence of the Bastions



Fig. 39: Existing layout



Fig. 40: Buckhill Walk and Axis proposals

- Legend**
- Existing Tree
 - Proposed Beech Tree (7no.)
 - Proposed Lime Tree (6no.)
 - Proposed Sessile Oak (5no.)
 - Proposed Sweet Chestnut (19no.)
 - Potential Veteran Tree
 - Paths etc
 - Setting-out Line

For full setting out proposals see LUC dwg 6172_019

15 Commentary on the Quarters

This is an overview of the Quarters (named in fig. 42) and the possibilities/need for tree planting in some of these areas. Generally there is only very limited need at the present time as priority lies foremost with the structural elements of the avenues. Furthermore there is now significant natural regeneration in those Quarters which are held in meadow management, and indeed there will be need for some selection and control to prevent some of the "meadows" reverting entirely to woodland. Reference should be made to the 2010 report and to figures 7a and 7b respectively (fig. 43).

Roughly half the area of the Gardens is managed as "meadow" with an early topping in March and cropping off in September (and occasionally in October if needed). The pattern has generally worked well and has helped to enhance the ecological diversity and value of the Gardens as a whole. However there are some areas where strong regeneration - notably in the Chestnut Quarter and pockets in the Colt Quarter - that need a careful balance of selection/recruitment of a modest number of seedlings to grow on with deliberate control and removal to prevent full succession to bosquet in place of the delightful agrostis dominated meadow flora.

There is some limited scope to increase the extent of recruitment in the two "Basin Wilderness Quarters", lying to North and South of Front Walk, and again in Old Pond Wood. While there is need to limit the extent of regeneration, these areas, sitting in contrast to the openness which surrounds the Round Pond plain could have more of a "bosquet" feel although reversion to wilderness woodland - as originally indicated by Bridgeman - would not suit the current intensity of access and use.

There is also some scope to increase modestly and beneficially the network of mown paths through and small glades within the meadow Quarters (as recently adapted in Coombes Quarter), inviting access across meadow areas and providing smaller scale open areas to sit within the longer grass areas.

Reference is made to the Fir Quarter which was located as a small triangle of land at the upper end of Inverness Gate Walk towards the Queensgate boundary. It was shown on Forsythe's plan and in nineteenth century illustrations with a small but lofty clump of Scots pine. It would be possible to establish a small clump - say 6 Scot's pine and possibly a couple of Metasequoia or alternative species within this Quarter.

Similarly, also reflecting mid nineteenth century illustrations of a view towards John Rennie's bridge, it would be possible to plant a small picturesque clump of conifers in the Queen's Temple Quarter. The view (fig. 41, c. 1840) shows the bridge (constructed in 1823) and a clump of trees including Scots Pine and a Fir. The planting of the conifers could be included in a project to open up more of the view from the Temple towards the bridge.

A further note is made here of the recognition of veteran trees. There are a number of candidates which probably qualify as veterans (figure 44). These mainly occupy locations within the Quarters as trees in the avenues have been more subject to consideration for replacement and renewal whereas trees in Quarters have had both space and setting to grow old more gracefully. Such trees are considerable assets both in visual and ecological terms. Their futures need to be safeguarded where possible by monitoring and prescriptive management. TRP have already started the process and indeed further detailed surveys, scheduling and prescriptive management might be incorporated into the ArboTrack system.



Fig. 41: View of the Queen's Quarter, c. 1840



Fig. 42: The Quarters



Kensington Gardens

M1: Full canopy at 2010

Key

Full canopy at 2009



Source: The Royal Parks

Date: 11/10/2010
Revision: A



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File: S142004211 Kensington Gardens\GIS\Themes\ArcGIS94211-01_038_FR_2009_canopy_RevA.mxd



M2: Full canopy at 2010 by age (longevity varies according to species)

Key

Broad age group

- Young (317)
- Early mature (1072)
- Semi mature (630)
- Mature (1292)
- Over mature (112)
- Unknown (4)



Source: The Royal Parks

Date: 11/10/2010
Revision: A



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Fig. 43: Figures 7a & 7b from the 2010 Tree Strategy Report



Fig. 44: Potential Veteran Trees

16 Sources and References

The following key references were used in the compilation of this report:

Key Documents

- Historical Survey of Kensington Gardens, LUC 1982;
- Kensington Gardens Tree Strategy, LUC 2010;
- Kensington Gardens Management Plan (2006–2016);
- Kensington Gardens Operations Plan (submitted for Green Flag Award)

Key Plans

- Charles Bridgeman, 1733;
- Forsythe 1784 - 1987;
- Ordnance Survey 1st Edition, 1870

