

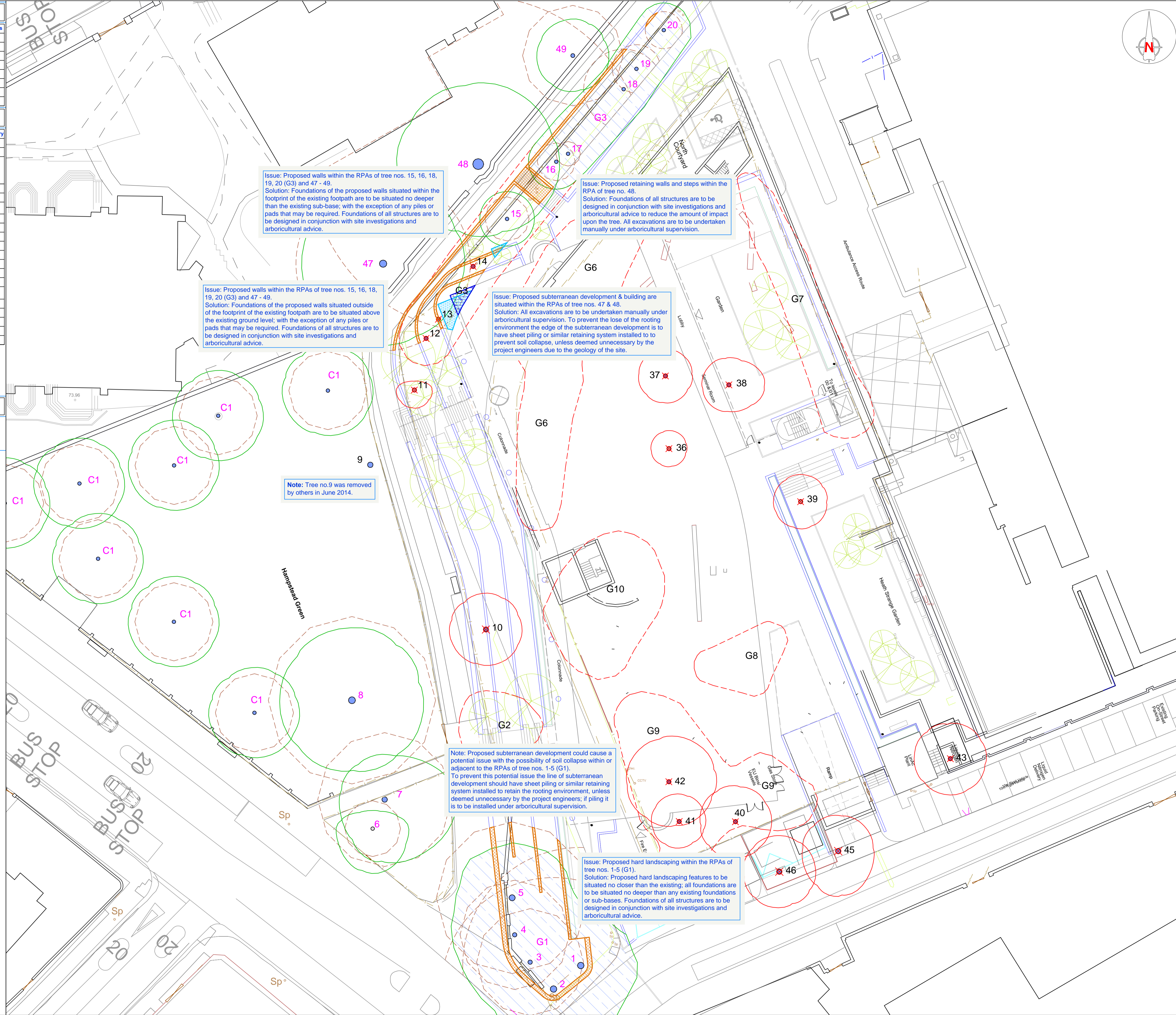
Arboricultural Impacts	
Impacts	Nos. of trees
Trees to be removed	15
Groups to be removed (Partial removals)	6 (1)
Trees to be transplanted	4
Groups to be transplanted	0
Trees with proposed incursions into RPAs	0
Groups with proposed incursions into RPAs	0
Trees that will pruning	0
Groups that will pruning	0

Tree Work Schedule			
No.	Species	Works	Category
10	Yew	Fall to ground level; grind out stump	B
11	Elder	Fall to ground level; grind out stump	C1
12 (G3)	Sycamore	Fall to ground level; grind out stump	B
13 (G3)	Sycamore	Fall to ground level; grind out stump	B
14 (G3)	Sycamore	Fall to ground level; grind out stump	B
36	Prunus sp.	Fall to ground level; grind out stump	C1
37	Prunus sp.	Fall to ground level; grind out stump	B
38	Swedish whitebeam	Fall to ground level; grind out stump	B
39	Prunus sp.	Fall to ground level; grind out stump	C1
40	Norway maple	Fall to ground level; grind out stump	B
41	Norway maple	Fall to ground level; grind out stump	B
42	Norway maple	Fall to ground level; grind out stump	B
43	Norway maple	Fall to ground level; grind out stump	B
45	Lime	Fall to ground level; grind out stump	B
46	Lime	Fall to ground level; grind out stump	B
G2	Sycamore	Fall to ground level; grind out stumps	C1
G3	Sycamore	Partial removal - Fall to ground level; grind out stumps	B
G6	Various	Fall to ground level; grind out stumps	C1
G7	Various	Fall to ground level; grind out stumps	C1
G8	Silver birch	Fall to ground level; grind out stumps	B
G9	Various	Fall to ground level; grind out stumps	C1
G10	Various	Fall to ground level; grind out stumps	C1

All tree work is to be undertaken in accordance with British Standard BS 3998:2010 Tree work - Recommendations. All arisings are to be removed and the site is to be left as found. Care is to be taken of the ground around retained trees to make sure that it does not become compacted as a result of tree surgery operations. No equipment or vehicles such as timber lorries, tractors, excavators or cranes shall be parked or driven beneath the crowns of any retained trees, to prevent subsequent compaction and root death.

Arboricultural Method Statement

All tree work is to be undertaken in accordance with British Standard BS 3998:2010 Tree work - Recommendations. Please refer to Arbtch Consulting Ltd. Tree Schedule, Arboricultural Method Statement and Tree Protection Plan, for full details on all surveyed trees and how all aspects of the development may be implemented without detriment to retained trees.



Tree Categories	
Category 'U'	Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years.
Category 'A'	Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category 'B'	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category 'C'	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and C trees. This is a minimum area in m² which should be left undisturbed around each retained tree.

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

The calculated RPA is capped to 707m², which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

Foundations within RPAs

The use of traditional strip foundations can result in excessive root loss and as such should be avoided.

Designs for foundations that would minimize the adverse impact upon trees soul include particular attention to the existing levels, proposed finished levels and cross sectional details. Site specific and specialist advice should be sought from the project engineers and arboriculturist.

- Root damage can be minimized by using:
- Piles with site investigation used to be determined their optimal location whilst avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm;
 - Beams, laid at or above ground level, and cantilevered as necessary to avoid tree roots identified by site investigation.

Where a slab for minor structures (e.g. shed base) is to be formed within the RPA, it should bear on the existing ground level, and should not exceed an area greater than 20% of the existing unsurfaced ground.

Slabs for larger structures (e.g. dwellings) should be constructed with a ventilated air space between the underside of the slab and the existing soil surface (to enable gas exchange and venting through the soil surface). In such cases, a specialist irrigation system should be employed (e.g. roof run-off redirected under the slab). The design of the foundation should take into account the effect on the load bearing properties of the underlying soil from the redirected roof run-off. Approval in principle for a foundation that relies on topsoil retention and roof run-off under the slab should be sought from building control authority prior to this approach being relied upon.

Where piling is to be installed near to trees, the smallest practical pile diameter should be used, as this reduces the possibility of striking major tree roots, and reduces the size of the rig required to sink the piles. If a piling mat is required, this should conform to the parameters for ground boarding. Use of the smallest practice piling rig is also important where piling within the branch spread is proposed, as this can reduce the need for access facilitation pruning. The pile type should be selected bearing in mind the need to protect the soil and adjacent roots from the potentially toxic effects of uncured concrete, e.g. sleeved bored piles or screw piles.

This information is compliant with British Standard BS5837:2012 Trees in relation to design, demolition and construction - Recommendations, section 7.5 Special engineering for foundations within the RPA.



Project: The Pears Building, Royal Free Hospital, London, NW3 2QG.

Client: The Royal Free Charity

Drawing: Arboricultural Impact Assessment

Based on: Royal Free Proposed Site Base; & Stage D architectural drawings

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Date:	Oct 2014	Scale:	1:200 @ A1
Drawn:	MGM		

Key:			
Tree Nos.:	1	Tree Canopies:	Trunks:
RPAs:	Category 'A' trees:	Category 'B' trees:	Category 'C' trees:
Category 'B' groups:	Category 'C' trees:	Trees to be removed:	
Incursions - Hard landscaping:	Incursions - Basement:	Incursions - Building:	

All dimensions should be checked on site. No dimensions are to be scaled from this drawing. Please note that any discrepancies from Arbtch Consulting Ltd. cannot be held responsible for inaccuracies in the base drawing in which this plan is based. This drawing is designed to effect the principles of the layout or design only, and relates only to the protection of retained trees. This drawing is not to be used as a definitive part of the engineering or construction design or method statement. An architect or structural engineer should be consulted over any matters of construction, detailing or specification and for any standards or regulatory requirements relating to proposed structures, hard landscaping or underground services. This drawing was produced in colour - a monochrome copy should not be relied upon. © Arbtch Consulting Ltd, 2012