Great Ormond Street Hospital for Children
NHS Foundation Trust

Great Ormond Street Hospital Charity

UCL INSTITUTE OF CHILD HEALTH

# Centre for Children's Rare Disease Research
at Great Ormond Street Hospital

## Aboricultural Assessment

**Simon Jones**
05 September 2014

## SUMMARY

Simon Jones Associates surveyed a total of eight individual trees, with trunk diameters of 75mm and above growing either within or adjacent to this site, in accordance with British Standard BS 5837: 2012, *Trees in relation to design, demolition and construction – Recommendations*. Six of these (London Planes nos. 1, 2 & 3, Tree of Heaven no. 5, Sycamore no. 6 and Cotoneaster no. 8) are growing off-site, and two Tree of Heaven individuals nos. 4 & 7 growing within the site.

An assessment of the impacts of the proposed re-development on these trees shows that two trees are to be removed. Both of these are Tree of Heaven specimens, one is a category 'U' and the other a category 'C' and neither are a key arboricultural feature of the conservation area.

It is proposed to reduce the crowns of London Plane trees nos. 1 & 2 on their north-east side to the line of the existing single storey building to allow two metres clearance between the outer edge of their canopy and the proposed building. The council's tree and landscape officer has been consulted about these works on a number of occasions and has agreed to the extent of this in principle. Other proposed pruning works are required to the off-site Cotoneaster (no. 8) to reduce its crown to the boundary, and this has previously been approved under planning permission 2014/2880/P. Also, a minor crown lift of the off-site Tree of Heaven no. 5 is required in order to allow adequate space for construction.

There are no incursions into the root protection areas (RPAs) of any of the trees to be retained as the existing single storey extension at the west end of the UCL Computer Centre Building has a basement, and trial pits adjacent to the boundary walls of the service yard have shown there are substantial footings or retaining structures in place.

The proposed pruning of London Plane no. 1 will alter the appearance of the canopy of the group of three London Planes at Guilford Place which are a key arboricultural feature of the site, however this will result in no more than a medium magnitude of impact on the character and appearance of the conservation area, and thus the proposal complies with national planning policy guidance.

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## APPENDICES.

# 1. INTRODUCTION.

## 1.1. Instructions.

1.1.1. Simon Jones Associates Ltd. has been instructed by Great Ormond Street Hospital Childrens' Charity ("GOSH") to visit No. 20 Guilford Street, London WC1 and to survey the trees growing on or immediately adjacent to this site.

1.1.2. We are instructed to record the trees' locations, species, dimensions, ages, condition, and visual importance; and to categorise them in accordance with British Standard BS 5837: 2012, *Trees in relation to design, demolition and construction — Recommendations*.

1.1.3. We are further asked to identify which trees are worthy of retention in the context of the proposed re-development of the site; to assess the implications of the proposals on these specimens, and to advise how they should be protected from unacceptable damage during demolition and construction.

## 1.2. Scope of report.

1.2.1. This report and the appended tree protection plan (TPP) reflect the scope of our instructions, as set out above.

1.2.2. The proposed re-development comprises an eight-storey building, with six levels above ground and two below.

1.2.3. The report is intended to accompany a planning application to be submitted to the London Borough of Camden, and complies with local validation requirements, and with the recommendations of BS 5837: 2012.

## 1.3. Site inspection.

1.3.1. A site visit and tree inspection was undertaken by Simon Jones and Abi St.Aubyn of Simon Jones Associates Ltd., on Thursday the 17th January, by Simon Jones on Thursday the 7th of February 2013, and by Abi St.Aubyn on Wednesday the 8th January 2014. Weather conditions during all of these inspections were clear, dry and bright. Deciduous trees were not in leaf during any of these inspections.

1.3.2. The tree locations plan at **Appendix 2** is based on the topographical survey plan provided.

1.3.3. The tree protection plan at **Appendix 3** is based on the proposed site layout plan by Stanton Williams, drawing no. 464_00_202.

### 1.4. National policy context.

1.4.1. Paragraph 14 of the National Planning Policy Framework (NPPF), (March 2012), states that there is a presumption in favour of sustainable development:

**"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."**

1.4.2. The NPPF makes it clear that planning permission for development should be granted unless the proposal is inconsistent with policies within the development plan, any adverse effects significantly and demonstrably outweigh the benefits, or the NPPF itself indicates that the proposal should be restricted.

1.4.3. Under Section 197 of the Town and Country Planning Act 1990, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The effects of proposed development on trees are therefore a material consideration in dealing with planning applications, and this is normally reflected in local development planning policies. However, as an overriding principle of national policy in the NPPF is that planning permission should be granted unless the adverse effects of a proposal significantly outweigh its benefits, it follows that development should only be refused on arboricultural grounds where loss of trees would have a significant and adverse impact on the character and appearance of the local landscape, on amenity or biodiversity. Against this background, the effects of the current proposal are evaluated in the following sections of this report.

### 1.5. Site description.

1.5.1. The site is on the south side of Guilford Street and comprises the existing UCL Computer Centre Building. This building is of four to five storeys, with a one and a half storey side extension at the western end. The western end of this building

abuts the pavement on the east side of Guilford Place and there are two London Plane trees growing in this area.

1.5.2. To the rear there is a service yard accessed from Millman Mews. This abuts the rear gardens of residential properties along Guilford Place to the west and the rear garden of a residential apartment building of No. 3 Long Yard to the south. The service yard is on level ground and is currently covered with hard standing.

## 2. THE TREES.

### 2.1. Survey findings.

2.1.1. We surveyed a total of eight individual trees with trunk diameters of 75mm growing within or immediately adjacent to the site[2]. Their details are found in the tree survey schedule at **Appendix 1**. The numbers assigned to the trees in the tree survey schedule correspond with those shown on the appended tree locations and protection plans.

### 2.2. Statutory controls.

2.2.1. At the time of writing we understand that none of these trees are covered by a tree preservation order (TPO).

2.2.2. The site is within the boundaries of the Bloomsbury Conservation Area.

### 2.3. Assessment of suitability for retention.

2.3.1. In order to assess which trees should be retained in the context of a proposed development, we have identified the key arboricultural features growing within or immediately adjacent to the site, whose removal we consider would have a significant and adverse impact on the character and appearance of the local landscape, on amenity or on biodiversity. There are two key arboricultural features of the site:

2.3.2. The first is the group of three off-site London Planes (nos. 1-3) which are street trees, growing in the pavement adjacent to Guilford Place: nos. 1 & 2 are growing on the east side adjacent to the site, and no. 3 is growing on the west side. In views of Guilford Place from Guilford Street the three trees appear as a visual and aerodynamic group.

[2] British Standard BS 5837: 2012, *Trees in relation to design, demolition and construction – Recommendations* recommends that all trees over 75mm stem diameter should be included in a pre-planning land and tree survey.

2.3.3. The second arboricultural feature is the off-site Tree of Heaven no. 5, which has a high crown and is visible in a single view from Millman Street to the west down Millman Mews, and in local views from Millman Mews.

2.3.4. In addition, we have categorised the trees in accordance with BS5837: 2012, and details of the criteria used for this process can be found in the notes that accompany the tree survey schedule. In line with the thrust of the NPPF and relevant local development policies, we have adjusted this methodology to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to biodiversity.

2.3.5. Two individual trees, Tree of Heaven no. 4 and the off-site Sycamore no. 6 have been assessed as category 'U'. Tree of Heaven no. 4 is a multi-stemmed self-seeded specimen which is growing with its trunks abutting the existing building. It has high potential to cause structural damage in the future and therefore its removal is recommended irrespective of this planning application.

2.3.6. Sycamore no. 6 is an off-site tree of approximately 12m in height, sparsely foliated, covered in ivy, and in significant irreversible decline. As this is an off-site tree its retention is not an issue; however, on-site category ‘U’ trees are unsuitable for retention, on the basis of them being in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

2.3.7. There are no category ‘A’ trees, and four category 'B' specimens: London Planes nos. 1, 2 & 3 growing within pavement adjacent to Guilford Place and the Tree of Heaven no. 5. which is 16.5m in height, growing in a residential garden to the west of the site. The three London Planes and the individual Tree of Heaven no. 5 comprise the two key arboricultural features of the site.

2.3.8. The remaining two trees are assessed as category 'C' trees (Tree of Heaven no. 7 and Cotoneaster no. 8). Tree of Heaven no. 7 is only of 12m in height and is suppressed by the larger specimen no. 5 to the west which is of 16.5m in height and contributes to the skyline. Cotoneaster no. 8 is a large shrub or small tree and is of only low landscape benefit and short-term potential only.

2.3.9. Whilst BS 5837 states that trees in categories ‘A’, ‘B’ and ‘C’ are all a material consideration in the development process, the retention of category ‘C’ trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary where they impose a significant constraint on development.

2.3.10. Furthermore, BS 5837 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature “*need not necessarily be a significant constraint on the site’s potential*”[3].

2.3.11. Moreover, BS 5837 states that “....care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal”[4].

2.3.12. Our assessment has been used as a key component of the process of designing the proposed layout. The tree survey was undertaken in conjunction with the detailed design work, and together with our assessment of suitability for retention informed the production of a tree constraints plan (TCP) which showed the most suitable trees for retention, based on the methodology set out above.

2.3.13. The TCP also showed how close to those trees selected for retention the proposed re-development could be located, in terms of two key criteria:

a). avoidance or minimization of unacceptable root damage; and

b). avoidance or minimization of the necessity for unacceptable pruning works.

2.3.14. The TCP was then used to inform the siting of the proposed re-development. In this way it has been ensured that the existing trees have made a significant contribution to the location of the proposed re-development, rather than the proposals dictating which trees are to be removed.

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[3] Ibid. 4.5.10.

[4] Ibid. 5.1.1.

# 3. ARBORICULTURAL IMPACTS.

## 3.1. Trees to be removed.

3.1.1. Two trees are proposed to be removed: the category 'U' Tree of Heaven no. 4, and the category 'C' Tree of Heaven no. 7.

## 3.2. Trees to be pruned.

3.2.1. Four trees are to be pruned to facilitate implementation of the proposals. These are shown at ***Table 1*** below.

| Tree no. | Species | Proposed Works |
|---|---|---|
| 1 | London Plane | Reduce the crown on the NE side to the line of the existing single storey building. |
| 2 | London Plane | Reduce the crown on the NE side to the line of the existing single storey building. |
| 5 | Tree of Heaven | Crown reduce on the E side to a height of 9m above ground level, in section where the crown is adjacent to the footprint of the proposed building. |
| 8 | Cotoneaster | Reduce crown on N side back to the boundary wall. |

***Table 1:*** **Proposed pruning works**

3.2.2. Following the pruning specified above, the proposed re-development will not lie within 2m of the extents of the canopies of trees to be retained.

## 3.3. Root Protection Area incursions.

3.3.1. The 'Root Protection Areas' (RPAs)[5] of the trees to be retained have been calculated in accordance with Section 4.6 of BS 5837; and have been assessed taking account of factors such as the likely tolerance of a tree to root disturbance or damage, the morphology and disposition of roots as influenced by existing site conditions (including the presence of existing roads or structures), as well as soil type, topography and drainage.

[5] The minimum area around a retained tree **"deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority."** BS 5837, paragraph 3.7.

3.3.2. The existing single storey extension at the west end of the UCL Computer Centre Building adjacent to Guilford Place has a basement and this is likely to be an effective root barrier.

3.3.3. Trial pits have been carried out adjacent to the boundary walls (southern wall and the western dwarf wall). These have shown the southern wall to have footings of 1.6m in depth, and the dwarf wall to have a metal retaining structure located 0.25m to the east of it, which extends to 1m in depth. Therefore both of these walls have been determined to be a root barrier, and the RPAs of the adjacent trees have been amended according.

3.3.4. As can be seen on the TPP, no parts of the proposed re-development are within the RPAs of any of the trees to be retained.

# 4. ASSESSMENT.

## 4.1. Tree removals.

4.1.1. As stated at 3.1.1. two individual Tree of Heavens are proposed to be removed. No. 4 is a multi-stemmed self-seeded specimen which is growing with its trunks abutting the existing building. Its removal is recommended irrespective of this planning application to ensure it will not cause any structural damage to the fabric of the building in the future. Furthermore, the tree is only of 9.5m in height and is barely visible from a public view point.

4.1.2. Tree of Heaven no. 7 is growing in tarmac in the south-west corner of the service yard. This tree is of 12m in height and has above average deadwood within its crown due to suppression from the larger Tree of Heaven (no. 5) growing in an adjacent residential garden to the west. Although it provides low level screening in views towards the site from Millman Mews, it is not visible from the wider locality, and is subordinate to the larger Tree of Heaven no. 5 which is to be retained.

## 4.2. Pruning.

4.2.1. As stated at 3.1.1. above the proposed pruning of London Planes 1 & 2 is to reduce their crowns on the north-east side to the line of the existing single storey building. This will alter the appearance of the crown of Plane no. 1 in views from the north, as the crown would appear one sided; but from the west and north-west there would be little difference in shape. Furthermore, this cutting back would leave pruning wounds on the north-east side of Plane no. 1 with diameters in excess of 100mm (probably up to 175mm), and thereby would be in excess of the maximum recommended by the British Standard BS3998:2010 Recommendations for Tree Works.

4.2.2. As a species London Plane is tolerant of pruning and although tree no. 1 is mature, it is of average physiological condition with no evidence of any infection with fungal fruiting bodies or other significant pathogens, and therefore we consider that it is likely it will be able to tolerate pruning of this nature.

4.2.3. Only one branch from London Plane no. 2 overhangs the existing building and this would need to be reduced by approximately three metres. This will not be to the detriment of the health or appearance of this specimen and in fact is consistent with appropriate arboricultural management works.

4.2.4. The proposed pruning of London Plane trees nos. 1 and 2 has been given careful consideration, and the Council's Tree and Landscape Officer, Mr Tom Little has been consulted on a number of occasions. Initially an onsite meeting was held on the 5th March 2014 to discuss the impacts on the Plane trees and various pruning options, and following this a letter was submitted to Mr Little outlining three pruning options. Subsequently, Mr Little confirmed via email on the 25th June 2014 that he had met with colleagues in the Arboricultural Services department and he confirmed that the pruning specified at 3.2.1., the least impact of the three options proposed, is acceptable in principle as part of this planning application.

4.2.5. The proposed pruning of Tree of Heaven no. 5, is a minor crown lift to ensure there is adequate space to construct the new building. There is already a crown clearance of 7m above ground level, and it is proposed to increase this to 9m over the footprint of the proposed building. This will require pruning of only two to three minor branches and the remaining crown above this height will not be pruned.

4.2.6. The proposed pruning of the single off-site Cotoneaster is already approved under a recent planning application (2014/2880/P) to erect an electrical substation in the rear yard adjoining Millman Mews. Following the pruning specified, the proposed substation will not be within 1m of the extent of the off site Cotoneaster no. 8, thereby providing adequate working space for construction, and a reasonable margin of clearance for future growth.

### 4.3. RPA incursions.

4.3.1. No parts of the redevelopment abut or are within the RPAs of any of the trees to be retained; and therefore, subject to the implementation of protective measures specified on the TPP, its construction will not cause unacceptable damage to roots or rooting environments as a result of root severance or damage, or compaction or pollution of the soil.

# 5. CONCLUSION.

## 5.1. Summary.

5.1.1. The proposed pruning of London Plane no. 1 will alter the appearance of its crown in views from the north, as its crown will appear one sided; but from the west and north-west there will be little difference in shape. Therefore the canopy of the group of London Planes at Guilford Place, which are a key arboricultural feature of the site, will be altered in views from the north. We consider that as London Plane is tolerant of pruning, that London Plane no. 1 is likely to tolerate pruning of this nature and on the basis of the above considerations we consider the arboricultural impact of this scheme to be of no more than medium magnitude.

5.1.2. The TPP shows the general and specific provisions to be taken during construction of the proposed redevelopment, to ensure that no unacceptable damage is caused to the root systems, trunks or crowns of the trees identified for retention. These measures are indicated by coloured notations in areas where construction activities are to occur either within, or in close proximity to, retained trees, as described in the relevant panels on the drawing.

5.1.3. The LPA can readily secure the implementation of and adherence to the measures shown on the TPP by the use of appropriate planning conditions.

5.1.4. Accordingly we conclude that, subject to the above, the proposed redevelopment would not have a significant and adverse impact on the character and appearance of the local landscape or the conservation area, insofar as these are contributed to by trees; and accordingly it complies with national planning policy guidance.

**July 2014**

# APPENDIX 1

SCHEDULE OF TREES

SIMON JONES ASSOCIATES Ltd.
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# Tree Survey Schedule

## GOSH 20 Guilford Street, London WC1

**January 2014**

# Tree Survey Schedule: Explanatory Notes

## GOSH 20 Guilford Street, London WC1

This schedule is based on tree inspections undertaken by Simon Jones and Abi St.Aubyn of Simon Jones Associates Ltd., on Thursday the 17th January, of Simon Jones on Thursday the 7th of February 2013 and Abi St.Aubyn on Wednesday the 8th January 2014. Weather conditions during all of these inspections were clear, dry and bright. Deciduous trees were not in leaf during any of these inspections.

The information contained in this schedule covers only those trees that were examined, and reflects the condition of these specimens at the time of inspection. We did not have access to the trees from any adjacent properties; observations are thus confined to what was visible from within the site and from surrounding public areas.

The trees were inspected from the ground only and were not climbed, and no samples of wood, roots or fungi were taken. A full hazard or risk assessment of the trees was not undertaken, and therefore no guarantee, either expressed or implied, of their safety or stability can be given.

Trees are dynamic organisms and are subject to continual growth and change; therefore the dimensions and assessments presented in this schedule should not be relied upon in relation to any development of the site for more than twelve months from the survey date.

**1. Tree no.**
Given in sequential order, commencing at "1".

**2. Species.**
'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe.

**3. Height.**
Estimated with the aid of a hypsometer, given in metres.

**4. Trunk diameter.**
Trunk diameter measured at approx. 1.5m above ground level; or where the trunk forks into separate stems between ground level and 1.5m, measured at the narrowest point beneath the fork. Given in millimetres.

**5. Radial crown spread.**
The linear extent of branches from the base of the trunk to the main cardinal points, rounded up to the closest halfmetre, unless shown otherwise. In the cases of small trees with reasonably symmetrical crowns, a single averaged figure is quoted.

**6. Crown break.**
Height above ground and direction of growth of first significant live branch.

**7. Crown clearance.**
Distance from adjacent ground level to lowest part of lowest branch, in metres.

**8. Age class.**
Young: Age less than 1/3 life expectancy
Semi-mature: 1/3 to 2/3 life expectancy
Mature: Over 2/3 life expectancy
Over-mature: Mature, and in a state of decline
Veteran: Surviving beyond the typical age range for species

**9. Physiology.**
Health, condition and function of the tree, in comparison to a normal specimen of its species and age.

**10. Structure.**
Structural condition of the tree – based on both the structure of its roots, trunk and major stems and branches, and on the presence of any structural defects or decay.
Very good: No significant physiological or structural defects, an upright and reasonably symmetrical structure; a particularly good example of its species.
Good: No significant physiological or structural defects, and an upright and reasonably symmetrical structure.
Moderate: No significant pathological defects, but a slightly impaired physiological structure; however, not to the extent that the tree is at immediate or early risk of collapse.
Indifferent: Significant physiological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse.
Poor: Significant and irremediable physiological or pathological defects, such that there may be a risk of early or premature collapse.
Hazardous: Significant and irremediable physiological or pathological defects, such that there is a risk of imminent collapse.

**11. Comments.**
Where appropriate comments have been made relating to:
-Health and condition
-Safety, particularly close to areas of public access
-Structure and form
-Estimated life expectancy or potential
-Visibility and impact in the local landscape

**12. Category.**
Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012, Table 1, adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to biodiversity.

**Category U:** Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category 'U' trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning).
• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.
• Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality.

**Category A**: Trees of high quality with an estimated remaining life expectancy of at least 40 years.
(1) Trees that are particularly good examples of their species, especially if rare or unusual.
(2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
(3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

**Category B**: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
(1) Trees that might be included in category 'A', but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and minor storm damage) such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category 'A' designation.
(2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
(3) Trees with material conservation or other cultural value.

**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.
(1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
(2) Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary landscape benefits.

# TREE SURVEY SCHEDULE

## GOSH 20 Guilford Street, London WC1

| No. | Species | Height | Trunk diameter | Radial crown spread | Crown break | Crown clear-ance | Age class | Physio - logy | Structure | Comments | Cate gory |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | London plane | 19.5m | 870mm | 10.6m N<br>11m NE<br>9.5m E<br>9.5m SE<br>4m S<br>4.5m SW<br>6 W<br>11.5 NW | 4.5m W | 5m N | Mature | Average | Moderate | On site; stout, single trunk; upright, growing in rectangular planting pit in pavement; evidence previously pollarded at approx. 8m, since then allowed to grow out; wide spreading crown, suppressed on SW side by the crown of tree no.2, with which it forms a group; otherwise a dominant crown, extends some way over the roof of 20 Guilford Street to E; no evidence of significant disease or decay; however, small cavity noted on S side of trunk at 5.5m opposite lowest lateral branch to the N; probable former pruning wound with localised cone of decay within; some of the re-shoots from the pollard points at 8m have excessive end weight and protrude from the crown, particularly one ascending branch to the NW; other heavy laterals in other areas would benefit in some reduction to reduce the pressure on these pollard points; also one particularly long lateral growing to the SE protrudes from the remainder of the crown as probably has been suppressed by lateral on tree no.2; together with tree no.2 and no.3 on the W side of Guilford Place, these trees form a significant group and are readily visible in the landscape; mirrors the tree'd character of Coram's Fields on the N side of Guilford Street, consequently of high landscape value; of only moderate quality due to previous pruning and slightly suppressed and one-sided crown; of long-term potential. | B (2) |
| 2 | London plane | 19m | 860mm | 8m N<br>6.5m E<br>10m S<br>12m W | 6m W | 8.5m E | Mature | Average | Moderate | On site; significant buttress roots around base of single trunk which bows to the NW from just above ground level; growing within large planting pit within footpath; buttress roots most prominent to the E and S; evidence that previously pollarded at 8m but since then has been allowed to grow out; possibly the lean and the one sided crown on the NW side due to former suppression by tree no. 1, but actually this tree has a more rounded and less suppressed crown than that specimen; long branches have excessive end weight, particularly that on the E side which grows out to the E/SE above the 20 Guilford Street and above Nos. 3-6 Guilford Place; this should be reduced to clear it from the other tree and to reduce its weight; evidence that branches to W that overhang Guilford Place have been reduced in the past; pruning wounds readily visible, most of them not fully occluded indicating this was done quite recently; together with tree no.1 and no.2, makes a significant contribution to the landscape of Guilford Place and this section of Guilford Street from both of which it is readily visible, also visible from Coram's Fields to N; of moderate quality and high landscape value; of long-term potential. | B (2) |

| No. | Species | Height | Trunk diameter | Radial crown spread | Crown break | Crown clear-ance | Age class | Physio - logy | Structure | Comments | Cate gory |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | London plane | 20.5m | 850mm | 11.5m N<br>11m E<br>7.75m S<br>4.75m W | 2.5m N | 3m S | Mature | Average | Moderate | Off site; evidence at base of lifting / distortion of brick and concrete pavers consistent with root activity; prominent buttress roots particularly on S and W sides, with lifted bark to a height of 2m on S side of trunk; stout trunk leans by approx. 15°, straightens to vertical above the lower pollard points at approx. 7.5m; low branch to N at 2.5m has developed into a subsidiary leader and extends heavily over Guilford Street to N, it protrudes from the remainder of the crown and is consequently wind exposed at its tips, extent of protrusion is approx. 3.5-4m, if branch removed crown spread to N would be reduced to 7.75m; evidence of pruning wounds on lower main trunk; two non-occluded wounds just above the lowest branch at 3m; the lower wound has some seepage from a very small non-occluded hole in the centre, the upper at approx. 3m has exposed wood approx. 100mm x 100mm; specimen previously pollarded at 7.5m with four main stems from this point; re-pollarded at a later date at 13m; broad dominant crown, spreading above this point; suppressed on S side and reduced back from adjacent four/five storey building; apparent magpie nest in top of crown; tree readily visible in views from Guilford Street and Guilford Place; in conjunction with trees trees no.1 and no.2 forms a significant landscape feature in this location; of moderate quality but of high value and of long-term potential. | B (2) |
| 4 | Tree of Heaven | 9.5m | 50mm<br>130mm<br>30mm | 3m N<br>1m E<br>3m S<br>3m W | 0m | 2m N | Young | Average | Poor | On site; triple trunks from base, growing adjacent to building; trunks in contact with wall of building, high potential for future structural damage; should be removed for sound arboricultural management reasons; of low quality, of low landscape value, but of medium-term potential. | U |
| 5 | Tree of Heaven | 16.5m | 450mm | 8m | 7m NE | 7m | Mature | Average | Indifferent | Off site tree; growing on adjacent garden where ground is 0.5m higher than the level of the car park; high crown; crown has been lifted and reduced in past; previously crown reduced at 4.5m on NE side leaving pruning wounds of approx. 130mm diam. which are partially occluded and from which there is vigorous regrowth; at 12.5, above ground level of car park, a S branch has necrotic bark and evidence of die back in a branch above this point leaving a stub of approx. 5-6m in length; of no more than moderate quality and of long-term potential; although views of the tree are prominent in the immediate area, tree is only visible in a glimpsed view from a single point in Millman Street, looking west down Millman Mews between Millman Court and the GOSH building, and therefore whilst it is the largest tree in the area it has only limited visibility from public areas and is of no more than moderate landscape value. | B (12) |
| 6 | Sycamore | 12m | est. 400mm (over ivy) | 3m N<br>3m E<br>5m S<br>5m W | m | 3m | Semi-mature | Below average | Poor | Off site tree; covered in ivy from base to approx. 11m and therefore it was not possible to ascertain crown break or inspect trunk or branch condition; sparsely foliated as it has become swamped by ivy; minimal overhang into the site; of low quality, of low landscape value, and of little potential. | U |
| 7 | Tree of Heaven | 12m | 360mm | 5.5m N<br>6.5m E<br>6.5m S<br>4m W | 3m N | 2m | Semi-mature | Average | Indifferent | On site; single trunk specimen growing in tarmac; from 1.5m above ground level the trunk leans 20 degrees to the E; union at 3m where main branch structure commences; above average deadwood in the crown av. diam. 30mm, suppressed by Tree of heaven no. 5; of moderate quality and of long-term potential; but of low landscape value. | C (1) |

| No. | Species | Height | Trunk diameter | Radial crown spread | Crown break | Crown clear-ance | Age class | Physio - logy | Structure | Comments | Cate gory |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | Cotoneaster | 10.5m | est. 230mm | 5.5m | 1.75m N | 2m | Mature | Average | Poor | Off site tree; single trunk growing adjacent to wall; at 1.75m trunk bifurcates into co-dominant unions with included bark; numerous crossing branches within the crown; of low quality, of low landscape value, and of little potential. | C (12) |

# Root Protection Areas (RPAs)

Root Protection Areas have been calculated in accordance with paragraph 4.6.1 of the British Standard 'Trees in relation to design, demolition and construction – Recommendations', BS 5837: 2012. This is the minimum area which should be left undisturbed around each retained tree. RPAs are portrayed initially as a circle of a fixed radius from the centre of the trunk; but where there appear to be restrictions to root growth the circle is modified to reflect more accurately the likely distribution of roots.

| ***Tree No.*** | ***Species*** | ***RPA*** | ***RPA Radius*** |
|---|---|---|---|
| 1 | London plane | 342.4$m^2$ | 10.44m |
| 2 | London plane | 334.6$m^2$ | 10.32m |
| 3 | London plane | 334.6$m^2$ | 10.32m |
| 4 | Tree of Heaven | 9.2$m^2$ | 1.71m |
| 5 | Tree of Heaven | 94.9$m^2$ | 5.5m |
| 6 | Sycamore | 72.4$m^2$ | 4.8m |
| 7 | Tree of Heaven | 58.6$m^2$ | 4.32m |
| 8 | Cotoneaster | 23.9$m^2$ | 2.76m |

# APPENDIX 2 & 3

TREE LOCATION PLAN

TREE PROTECTION PLAN

N

GUILFORD STREET

MILLMAN STREET

BASEMENT
False Floor 19.70

INTERNAL WALL OF BASEMENT

No 20
UNIVERSITY OF LONDON
COMPUTER CENTRE
False Floor 19.74

GAS ROOM
FL 18.82

BRITISH POSTGRADUATE
MEDICAL FEDERATION
FL 18.82

FL 19.37
False Floor 19.73

BASEMENT
TH 19.88
False Floor 19.70

1
London plane

DISUSED PUBLIC TOILETS
BELOW GROUND

2
London plane

3
London plane

[4]
Tree of Heaven

SUB BASEMENT
FL 15.40

SWITCH ROOM FL 15.97

Depth to soil 410 locked

11 STEPS

U.C.L.
INSTITUTE OF
CHILD HEALTH

GUILFORD PLACE

MILLMAN MEWS

MILLMAN COURT

5
Tree of Heaven

7
Tree of Heaven

8
Cotoneaster

[6]
Sycamore

0 4m 8m 12m 16m 20m

METRES

1 : 200 @A1

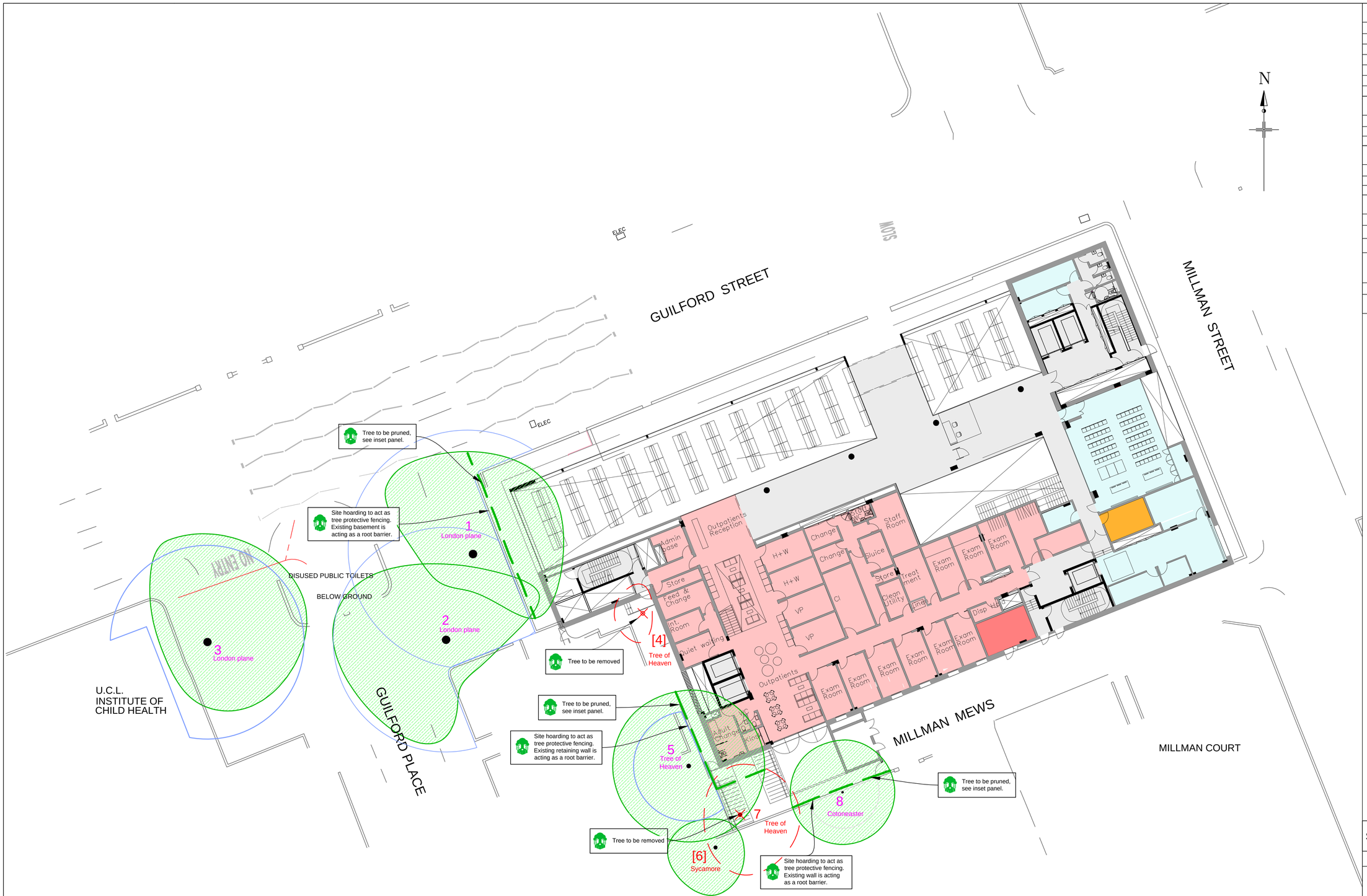
LIST OF TREES
(For full details, see SJA Tree Schedule.)

| No. | Species | Height | Trunk diameter | B.S. Category |
|---|---|---|---|---|
| 1 | London plane | 19.5m | 870mm | B (2) |
| 2 | London plane | 19m | 860mm | B (2) |
| 3 | London plane | 20.5m | 850mm | B (2) |
| 4 | Tree of Heaven | 9.5m | 50mm 130mm 30mm | U |
| 5 | Tree of Heaven | 16.5m | 450mm | B (12) |
| 6 | Sycamore | 12m | est. 400mm (over ivy) | U |
| 7 | Tree of Heaven | 12m | 360mm | C (1) |
| 8 | Cotoneaster | 10.5m | est. 230mm | C (12) |

Simon Jones Associates Ltd.

| | |
|---|---|
| Project: | Great Ormond Street Hospital |
| Client: | Great Ormond Street Hospital Charity |
| Drawing: | TREE LOCATIONS PLAN |
| Drawing No: | SJA TL 13012-02 |
| Revision No: | |
| Based On: | Topographical survey |
| Drawn By: ASA | Date: Jan. 2014 |
| Scale: | 1:200 @A1 |
| Tel:(01737) 813058 | Fax:(01737) 816140 |
| sja@sjatrees.co.uk | |
| Tree nos.: ● 1 | Category 'U' trees: ● [4] |
| Tree canopies: | |

For further information refer to the SJA Tree Schedule
Do not scale from this drawing; please check all dimensions on site, and notify us of any discrepancies. Simon Jones Associates cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based.




## Arboricultural Impacts: Summary

(For details, see below)

| Impact | No. of Trees |
|---|---|
| Trees to be removed | 2 |
| Trees where supervised demolition needed within RPAs | 0 |
| Trees where manual excavation needed within RPAs | 0 |
| Trees where above soil surfacing needed within RPAs | 0 |
| Trees with proposed underground services within RPAs | 0 |
| Trees that will require pruning | 4 |

### Trees to be Removed

| No | Species | Category |
|---|---|---|
| 4 | Tree of Heaven | U |
| 7 | Tree of Heaven | C |

### Total numbers of trees to be removed

| Category | No. of trees | Category | No. of trees |
|---|---|---|---|
| A | 0 | B | 0 |
| C | 1 | U | 1 |

### Trees that will require pruning

| No. | Species | Works |
|---|---|---|
| 1 | London plane | Reduce the crown on the NE side to the line of the existing single storey building. |
| 2 | London plane | Reduce the crown on the NE side to the line of the existing single storey building. |
| 5 | Tree of Heaven | Reduce crown on the E side to the boundary, up to a height of 9m from ground level, in section where the crown is adjacent to the footprint of the proposed building. |
| 8 | Cotoneaster | Reduce crown on N side back to the boundary wall. |

Pruning is to be undertaken in accordance with the British Standard Recommendations for Tree work, BS3998: 2010.
Climbing irons or spikes are not to be used whilst pruning trees.

**Simon Jones Associates Ltd.**

| | |
|---|---|
| Project: | GOSH Redevelopment |
| Client: | Great Ormond Street Hospital Charity |
| Drawing: | TREE PROTECTION PLAN |
| Drawing No: | SJA TPP 13012-03 |
| Revision No: | |
| Based On: | Ground floor plan 464-00-202 |
| Drawn By: ASA/BMO | Date: July 2014 |
| Scale: 1:200 @ A1 | |
| Tel:(01737) 813058 | Fax:(01737) 816140 |
| sja@sjatrees.co.uk | |
| Tree nos.: ● 8 | Category 'U' trees: ● [4] |
| Canopies of trees to be retained: | |
| Category 'A' RPA: | Category 'B' RPA: |
| Category 'C' RPA: | |
| Trees to be removed: 7 | Indicative pruning line: |

For further information refer to the SJA Tree Schedule

Do not scale from this drawing: please check all dimensions on site, and notify us of any discrepancies. Simon Jones Associates cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based.



This drawing is designed to reflect only the principles of layout and /or design insofar as these relate to the protection of trees to be retained, and should NOT be read as a definitive engineering or construction method statement. Reference should be made to the architect or structural engineer, as appropriate, over any matters of construction detail or specification, or any engineering standards or regulatory requirements relating to proposed structures, hard surfaces or underground services.