

S354-J1-IA-1

# REPORT

on the impact on trees  
of proposals for development  
at  
Clarkson Row, London, NW1 7RA

( 23rd November 2020 )

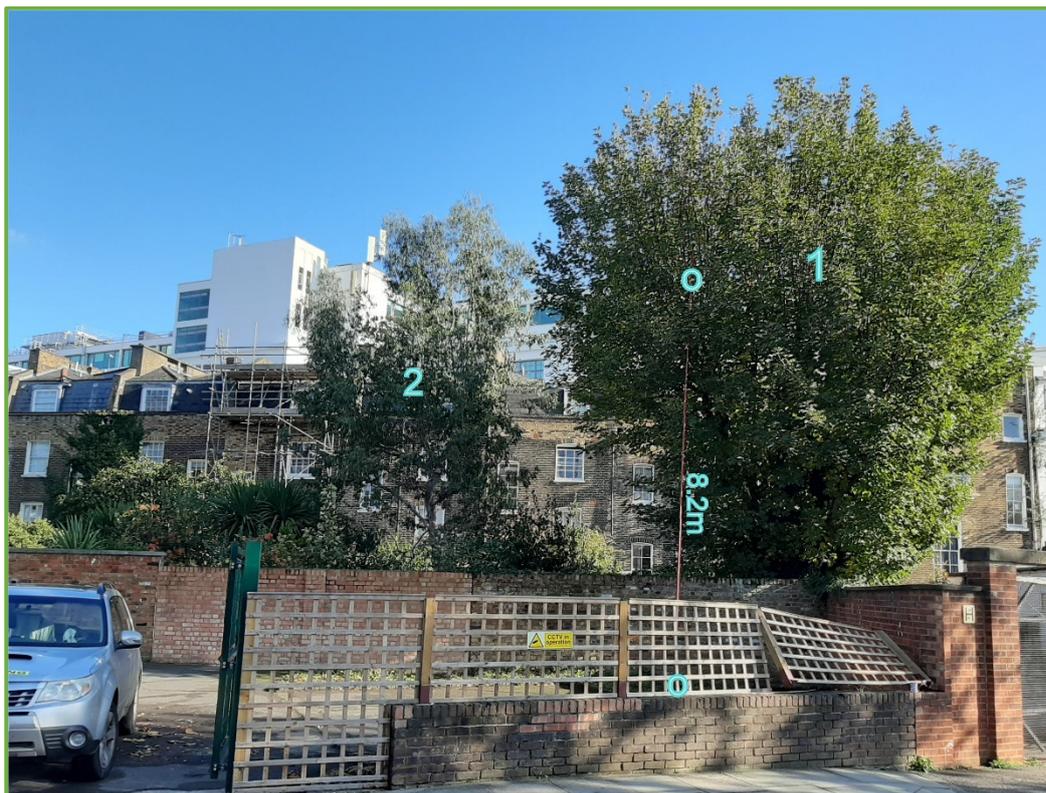


**JOHN CROMAR'S  
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Registered Consultant of the Arboricultural Association  
John Cromar, Dip. Arb. (RFS), F.Arbor A.



## **01**

### **Introduction and Instructions**

I am instructed by Marek Wojciechowski Architects Ltd on behalf of clients to make an assessment of tree amenity value and condition of trees at Clarkson Row, London, NW1 7RA and of the impact of a proposal for development (a residential development of 8 units) on such trees. Accordingly, I visited the property on 4<sup>th</sup> November 2020 in order to carry out an inspection.

## **02**

### **Copyright**

#### **02.01**

Copyright is retained by the writer. This is a report for the sole use of the client(s) named above. It may be copied and used by the client in connection with the above instruction only. Its reproduction or use in whole or in part by anyone else without the written consent of the writer is expressly forbidden. **The appended schedule of tree work, and the plan, may, without the written consent of the writer, be reproduced to contractors for the sole purpose of tendering.**

## **03**

### **Notes**

#### **03.01**

##### **PLANS**

S354-J1-P1 gives an approximate representation (in plan) of actual crown form, and is intended to indicate the relationship of neighbouring trees to each other, and should be read with the comments on crown shape and tree value in TREE DETAILS appended. The plan gives a quick reference assessment of value as per section 4, table 1, of BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'. Assessment of value in the TREE DETAILS table appended is, in accordance with this British Standard related mainly but not exclusively to the criterion of *visual value to the general public*. The Standard recommends a way of classifying trees when assessing their potential value in relation to proposed development. Some surveys may not include any trees of one or more categories. Table 1 suggests categories 'U', 'C', 'B' and 'A', in ascending merit. 'U' (**RED crown outline on plan**) category trees are dangerous \ low value trees that could require removal for safety or arboricultural reasons. 'C' (**GREY or black/uncoloured crown outline on plan**) category trees are of no particular merit, but in adequate condition for retention. 'A' category trees (**GREEN crown outline on plan**) are trees of high vitality or good form, or of particular visual importance: 'B' (**BLUE crown outline on plan**) category are good trees but may be of slightly poorer form or be not sited as importantly as 'A' category trees. See TREE DETAILS appended. Category Assessment appears in column 10. This standard also provides a way of determining an area (see TREE DETAILS column 7) – the **RPA** – root protection area - around the trunk of the tree in which protective measures should be used in order to prevent significant damage to trees. There are various ways of achieving this. A simple way is to use exclusion fencing, but other methods have been shown by established use to be very effective.

### **03.02**

S354-J1-P2 shows proposed retained trees and is colour-coded to indicate where arboricentric methods are proposed during the construction process.

## **04**

### **Sources and Documents**

Ground level inspection.

Supplied plans :

Marek Wojciechowski Architects drg. nos.:

19068 P1000 (existing)

19068 P2000 (proposed)

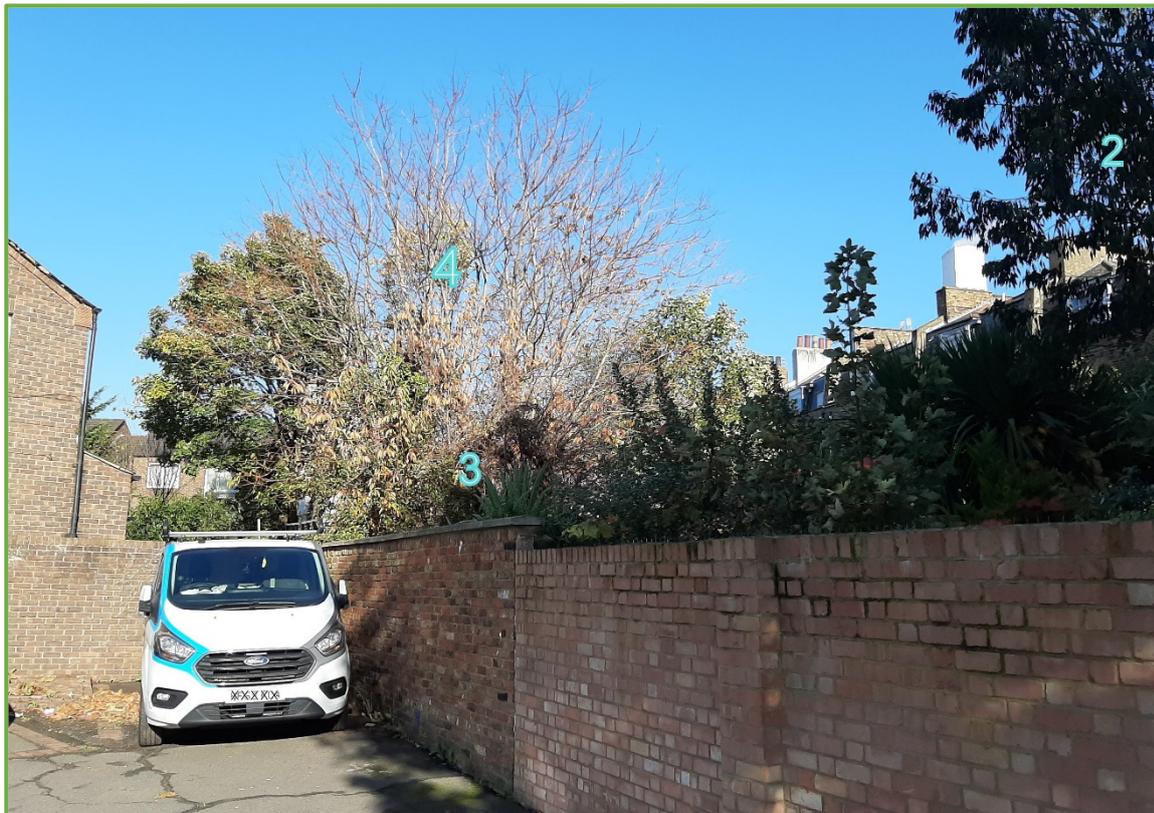
## **05**

### **Appraisal**

#### **05.01**

##### **AMENITY / SCREENING BY TREES AND SHRUBS**

There are no trees on the site. A tree adjacent to the site is of some general public amenity value, as it is visible from Clarkson Row. This and another tree are of some considerable strictly local amenity value to owners / users of the site, and to those of adjoining properties, providing valuable screening.



## 05.02

### TREES AND LAYOUT - POTENTIAL FOR CONFLICT WITH ROOTS

(Details appear in the tree detail table appended.) The figures in columns 5 and 6 in the **Tree data** table appended indicate the root protection area ('RPA' below), and typically the basic exclusion fence position. New materials and methods have been developed and continue to be developed that assist in promoting the successful retention of trees in association with constructed features. It should be noted that BS 5837:2012 (section 7.4.2) supports 'up and over' methods of construction where appropriate. The design principle of this method is outlined within Arboricultural Practice Note 12 (Through the Trees to Development, - a revision of APN 1, 1996, published originally by AAIS / Tree Advice Trust). This method has been used for many years on the recommendation of John Cromar's Arboricultural Co. Ltd. and has successfully allowed the retention of mature trees very close to construction activities.

## 05.03

RPA is an abbreviation used in BS5837:2012, signifying the *root protection area*. An assessment as per BS5837:2012 section 4.6.2 has been carried out in connection with the plotting of all RPAs of all trees. (This section requires that site conditions such as location of structures, tree mechanics, etc., are taken into account in determining the likely position of roots.)

This is of particular relevance in connection with this site where several trees to be retained are sited below the level of the main site by approximately 500mm. The estimated root spreads of trees 1 and 3 have therefore been 'morphed' to reflect this.

## 05.04

### ROOTS and DESIGN

SRP is an abbreviation for *static root plate*, (after Mattheck, 1991, etc.) a radial dimension derived from trunk diameter based on studies of wind-thrown trees and thus a guide to where *structurally* significant roots are likely to be located. The RPA is a guide to where *systemically* significant roots are likely to be located.

Minor encroachment on the RPA of a retained tree is entailed, as analysed in the table below :

Tree no.	Tree	RPA area (m <sup>2</sup> )	Area affected (m <sup>2</sup> )	% affected	Notes
1	sycamore	222.80	7.09	3.18%	Proposed footprint

In the writer's now extensive experience gained over more than a third of a century in arboriculture, controlled, limited-extent, vertical root cutting of this kind is of little or no significance to tree health. The actually damaging operations are those that degrade or compact the ground surface within the RPA, for example by uncontrolled access by mechanical excavators, dumpers, etc.

It should be noted that the very limited root cutting entailed in this proposal is, by an order of magnitude, far less than that entailed in the commercial moving

of maturing and even mature trees, which has been practised successfully for centuries.

In view of the above I conclude that no special footings are needed from the arboricultural perspective. In this case all trees to be retained can be adequately protected by exclusion fencing and arboricentric methods as proposed below to reduce impacts on root systems of retained trees.

### 05.05

#### PERCEPTION OF TREES

The majority of the significantly-sized retained trees are located mainly to the N and NE of the habited parts of the proposed dwelling.

<b>Dwelling no.</b>	<b>Trees in relation sited mainly to</b>	<b>Room use on relevant elevation(s)</b>	<b>Comments</b>
1	N	bedroom	No sunlight shading due to orientation
2	N & NE	bedroom, kitchen/living/dining	No sunlight shading due to orientation/morning shading only, not significant
3	N	bedroom	No sunlight shading due to orientation
4	N & NE	kitchen/living/dining	No sunlight shading due to orientation/morning shading only, not significant
5	N	bedroom	No sunlight shading due to orientation
6	N & NE	kitchen/living/dining	No sunlight shading due to orientation/morning shading only, not significant
7	N	bedroom	No sunlight shading due to orientation
8	N & NE	kitchen/living/dining	No sunlight shading due to orientation/morning shading only, not significant

All trees surveyed lie outside the proposed curtilage, and therefore can reasonably be viewed as secure from proposals to fell or reduce.

In view of the above I conclude that shading by and perception of trees has been considered (as sections 5.3.4 and 5.6.2.6 of BS 5837:2012 recommend) and appear not to be negative factors.

### 05.06

Processing by the LPA of any due application from future owners for permission to carry out tree work will no doubt be carried out with due regard for good arboricultural practice and according to British Standard 3998:2010 'Tree Work – Recommendations'. In any appeal that might arise against refusal of LPA consent to reduce inappropriately, or fell trees, common arboricultural criteria to those of the LPA would be used by any specialist tree inspectors of the Planning Inspectorate, and thus the trees would in my view be thus protected against inappropriate work. I consider that any such notional issues are very likely to be

dealt with appropriately as no doubt in the past they have been within the Borough, as such tree/building juxtapositions are far from rare.

#### **05.07**

##### **SUPERSTRUCTURE AND TREE APPRAISAL - TREE PRUNING**

I note from the drawings supplied that some encroachment on the crowns of retained trees will occur. However, the pruning required is of no importance to the health or appearance of the retained item – tree 1, has been carried out in the past, and can easily be addressed by tree surgery in accordance with BS5837:2012 5.3.4 ( c) NOTE 2, 7.7.3, etc., and is within the bounds of good arboricultural practice / British Standard 3998:2010 'Tree work – Recommendations'. A schedule for the use of a contractor appears below.

#### **05.08**

##### **PLANTING**

It is typical for landscaping to be a reserved matter consequent to any grant of consent and for a full landscaping scheme to detail tree, shrub and herbaceous planting etc.

See plan for locations of selected proposed trees:

A = *Populus tremula* 'Erecta'

B = *Eucryphia x nymansensis* 'Nymansay'

C = 3 x *Carpinus betulus* 'Frans Fontaine'

#### **05.09**

##### **PUBLISHED GUIDANCE IN RELATION TO TREES AND DEVELOPMENT**

In conserving trees on development sites, expected best practice is as in B.S. 5837 : 2012. Section 5.1.1 notes :

**“Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification : 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.”**

#### **05.10**

The above advice appears to have been considered in formulating proposals for development.

#### **05.11**

##### **CONCLUSION**

**I conclude that the construction proposed, subject to precautionary measures as outlined above and as per the recommendations outlined below, will not be injurious to trees to be retained, nor will require any trees to be removed.**

## **05.12**

### SUPERVISION

Supervision by and regular communication with an arboriculturist is typically an essential element of site management where trees are present and to be retained. I propose that this takes place at key points in the construction process, and additionally whenever required by the architect or LPA. These key stages are as per **OVERVIEW** below.

## **05.13**

Note to LPA : if the Authority is minded to grant consent, it is invited to consider:

- a) the incorporation of the specific *order of implementation* of the arboricentric methods below into any Conditions applied.
- b) to specify in a Condition that any Construction Management Plan incorporates all the arboricentric methods herein.

Such measures are likely to maximise tree protection.

## 06

### TREE PROTECTION

#### 06.01

## OVERVIEW

It is highly important to tree health and vitality that construction activities are carried out strictly in accordance with the tree protection methods specified below. It is widely not understood that a **single** traverse of a root protection area by a mechanical excavator can cause SIGNIFICANT and PERMANENT (albeit temporarily invisible) damage to trees.

Any such machinery, including, for example, tracked piling rigs, shall be kept at ALL times outside the root protection areas (RPAs) as indicated in the **Tree data** table appended, and/or shall be subject to ARBORICENTRIC METHODS below.

Fences to protect trees shall be respected as TOTAL EXCLUSION fences. Hence, before any site activity, **including demolition**, the fence lines shall be complete.

Protective fencing and any temporary protection of ground surfaces will have to be removed in due course to allow finishing of landscaping, paving, etc., but this shall not take place until all need for vehicular access to the site has passed, and shall be agreed with arboriculturist / planners on site during progress of works.

Supervision by an arboriculturist appointed directly by the client (**not the main contractor**) should take place at key points in the construction process, and additionally whenever required by the architect, client, main contractor or LPA. These key stages are :

- 1) **At site possession by contractor, outline all tree protection measures with site agent and resolve any issues arising.**
- 2) **Ensure remedial tree work including any minor accommodatory tree work required for erection of scaffolding near trees is carried out to specification and sign off. Ensure protective fencing is erected and completed as proposed. Ensure any site cabins, mixing sites for mortars, disposal-to-skip sites, etc., are located appropriately, and sign off.**
- 3) **Supervise lifting of hard surfacing near trees.**
- 4) **Supervise laying of temporary or permanent geotextile combination ground protection and sign off.**
- 5) **Attend as required to supervise digging for and the laying of lighting cable ducts or services.**
- 6) **Approve any removal or adjustment of tree protection and sign off.**

# PREPARATION / DEMOLITION

PLEASE READ WITH PLAN REFERENCE S354-J1-P2, APPENDED.

The Methods shall be implemented **in the order given** unless it is stated to the contrary.

## Method 1 : TREE WORK

Tree work shall be in accordance with the provided specification and good arboricultural practice, and to BS 3998:2010 'Tree Work - Recommendations' and in accord with spread line marked on plan. Branches shall be pruned to clear 7m above ground level.

## Method 2 : GROUND SURFACE HANDLING and PROTECTION

This method shall apply in the zone hatched **blue** on plan. NO levels reduction shall take place. This includes no 'scraping up' with a mechanical excavator or otherwise. Any existing hard surfacing, any existing surface debris, light vegetation, etc., that lies within the zone shall be removed using hand tools only. A 2D geotextile membrane, such as 'Ekotex' shall be laid; 100mm of green-source woodchip; continuously abutted scaffold boards or manufactured boards so as to completely cover this area. This area shall be used for pedestrian access only.

OR

If loads exceed that of pedestrians, a 2D geotextile membrane, such as 'Ekotex' shall be laid; 150mm of green-source woodchip; continuously abutted scaffold boards and a layer of manufactured board at least 25mm thick screwed to the underlying scaffold board so as to completely cover this area. This area may be used for pedestrian-operated plant up to 2 tonnes in weight.

# CONSTRUCTION

## Method 3 : SERVICE TRENCHES

N.B. -This applies to ALL services : Electricity, gas, water, etc. Existing services shall be utilised wherever possible.

These methods shall apply generally within any RPA (**orange** circles).

1) The trench shall be opened with an air-spade to required depth. Roots 20mm or more in diameter unearthed shall be temporarily protected with bubble-wrap and insulating or gaffer tape while rest of trench is dug. Services shall be worked under/over/around/ between roots so as not to cut or damage any larger than 20mm diameter.

OR

2) The trench shall be dug with hand tools only. Probes such as screwdrivers or steel rod <10mm diameter to determine root presence ahead of digging shall be used. The work shall proceed cautiously. No roots over 20mm diameter shall be cut. Roots 20mm or more in

diameter unearthed shall be temporarily protected with bubble-wrap and insulating or gaffer tape while rest of trench is dug. Services shall be worked under/over/around/ between roots so as not to cut or damage any larger than 20mm diameter.

#### **Method 4 : ROOT PRUNING**

This method shall apply within only the RPAs (**orange** circles) of tree 1. The excavation shall be made with hand tools only. Any roots encountered shall be trimmed to the edge of excavation using a sharp edge tool such as handsaw or secateurs; the cuts shall be made at right angles to the long axis of the root, and in accordance with BS3998:2010, 8.6. An HDPE membrane shall be placed between any root-bearing soil and any wet concrete to be poured. Impermeable sheeting (to exclude wet concrete) shall be laid and secured locally by temporary weighting / taping as required. Concrete casting shall take place without disturbing this protective layer.

## **LATE CONSTRUCTION and LANDSCAPING PHASE**

#### **Method 5 : GROUND PREPARATION FOR TREE PLANTING AREAS**

This method shall apply after completion of main build only. Ground preparation for tree planting areas shall entail removal of hard surfacing using hand tools or hand-held power tools only, the removal of degraded or compacted or contaminated soil to a depth of at least 0.45m below finished surrounding ground level. The base and sides of the pit shall be forked over to at least one hand fork's spit in depth. Screened topsoil (to BS3882 : 2015 topsoil) with biochar ( such as <https://www.soilfixer.co.uk/biochar-article> ) - 5% of the topsoil volume. This equates to about 20 kgs of product per cubic metre of topsoil (to BS3882 : 2015 topsoil) to a maximum depth of 0.45m within 1.3m of the trunk location of each tree to be planted. Soil handling of any kind shall take place only after a minimum of 3 days after heavy rain, and shall where possible be carried out 7 days or more after such rainfall. Tree planting shall be in accordance with British Standard 8545:2014 'Trees : from nursery to independence in the landscape - Recommendations'. This enshrines good arboricultural practice: the tree shall be planted so that the root collar lies at finished ground level, shall be short-staked and tied with proprietary tree tie. Any whips shall similarly be planted so that the root collar lies at finished ground level, and shall be protected with proprietary growing tube (staked). The ground surface shall be mulched within 0.75m of the trunk location to a depth of 100mm with composted organic material or proprietary mulch mat.

#### **Method 6 : MAINTENANCE**

Maintenance shall consist of the regular moderate watering of any plant the subject of the planting proposal during the first season (April 15 to October 15) after planting and thereafter in the following four years if drought conditions occur. Hedges shall be trimmed twice yearly to a

**height of no less than 1.3m and no less than 0.5m thickness (cross sectional). Mulch shall be kept topped up to a maximum depth of 100mm. Grassed areas shall be cut weekly (April 15 to October 15).**

**Method 7 : REPLACEMENT**

**If within five years of issue of certificate of completion any plant the subject of the planting proposal dies or in the opinion of the LPA becomes seriously damaged or diseased, the same shall be replaced according to the above methods.**

**(All design subject to engineering approval, but used on other sites and known to be practicable and reliable).**

**07**

**General**

If conflicts between any part of a tree and the building(s) arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflect poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

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Date: 23<sup>rd</sup> November 2020

Signed:



John C. M. Cromar, Dip.Arb.(RFS) F.Arbor A.

01582 808020 / 07860 453072

## APPENDICES

### 08

#### Tree Data

Tree number	Tree type	Height	Stem diameters	Radius of RPA if circle (mm)	RPA (m <sup>2</sup> )	Comments	Life expectancy (years)	Assessed BS5837 value category
1	sycamore	10	350, 350, 350, 250, 250	8421	222.8	Reduced to a height of around 6m, last around 2017 : history of pruning noted. Multiple stems ; no access possible. Screening value but very poor form; cannot reasonably be considered a constraint on construction by reason of root system.	40+	B2
2	gum	10	260	3120	30.6	Reduced to 4m in height c. 2017. Some contribution to screen	40+	B1
3	wild cherry	5	250	3000	28.3	No access ; has been heavily reduced and part of the crown has died back	<10	U
4	tree of heaven	15	650	7800	191.1	No access	40+	B1

In all cases, in the absence of negative comment on health/vitality and structure, normal physiological and structural condition should be considered to apply.

Dependent on time of year of survey, deciduous trees may not have been in leaf at the time of inspection. This may have limited precise identification.

**09**  
**Schedule**

***Trees at Clarkson Row, London, NW1 7RA***

Please read in conjunction with plan S354-J1-P2. Trees outside the curtilage of the property may be included. As applicable, if only for courtesy, the consent to, or acquiescence to, and communication of the timing of the recommended remedial works, as far as the relevant owner is concerned, should be checked before any such trees are actually treated.

<b>Tree number</b>	<b>Tree type</b>	<b>Height</b>	<b>Stem diameters</b>	<b>Comments</b>
1	sycamore	10	350, 350, 350, 250, 250	Prune spread to near boundary as indicated on plan.

NOTES:

**This schedule notifies the LPA, where such notification is required, of intention to prune or remove trees in accordance with TCP Act 1990 Section 211.** 42 days after notification should be allowed before proceeding with the work, during which time (and after) the LPA may place a Tree Preservation Order on the tree(s), thus requiring a formal application for any works to living wood.

All tree work should be carried out to BS 3998 : 2010 'Tree Work - Recommendations'. The Wildlife and Countryside Act 1981 protects with certain exceptions all birds and their nests. It is an offence to destroy such nests or take or injure such birds in the course of tree works operations. If a tree is a bat-roost, a licence to work on the tree must first be obtained from the relevant Statutory Nature Conservation Organization (in England : Natural England 0845 601 4523.) Acting without a licence is likely to be justifiable only in acute emergencies threatening human life and where all other legally available option such as footpath diversion, fencing and warning signs cannot be applied.

**10**  
**Plans**

S354-J1-P1 v3  
S354-J1-P2 v4



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**KEY TO COLOURS /  
LINETYPES USED IN  
RELATION TO TREES**

- GREEN - High Value (A)
- BLUE - Moderate Value (B)
- BLACK - Low Value (C)
- RED - Remove/Very short life expectancy (U)
- ORANGE SHAPES: Root Protection Areas

**Spread and trunk colours correspond directly to those used in British Standard 5837:2012, Table 2.**

 TOOTHED LINE: Tree spread line

**NOTES**  
Do not use for setting out purposes.  
All dimensions to be checked on site.

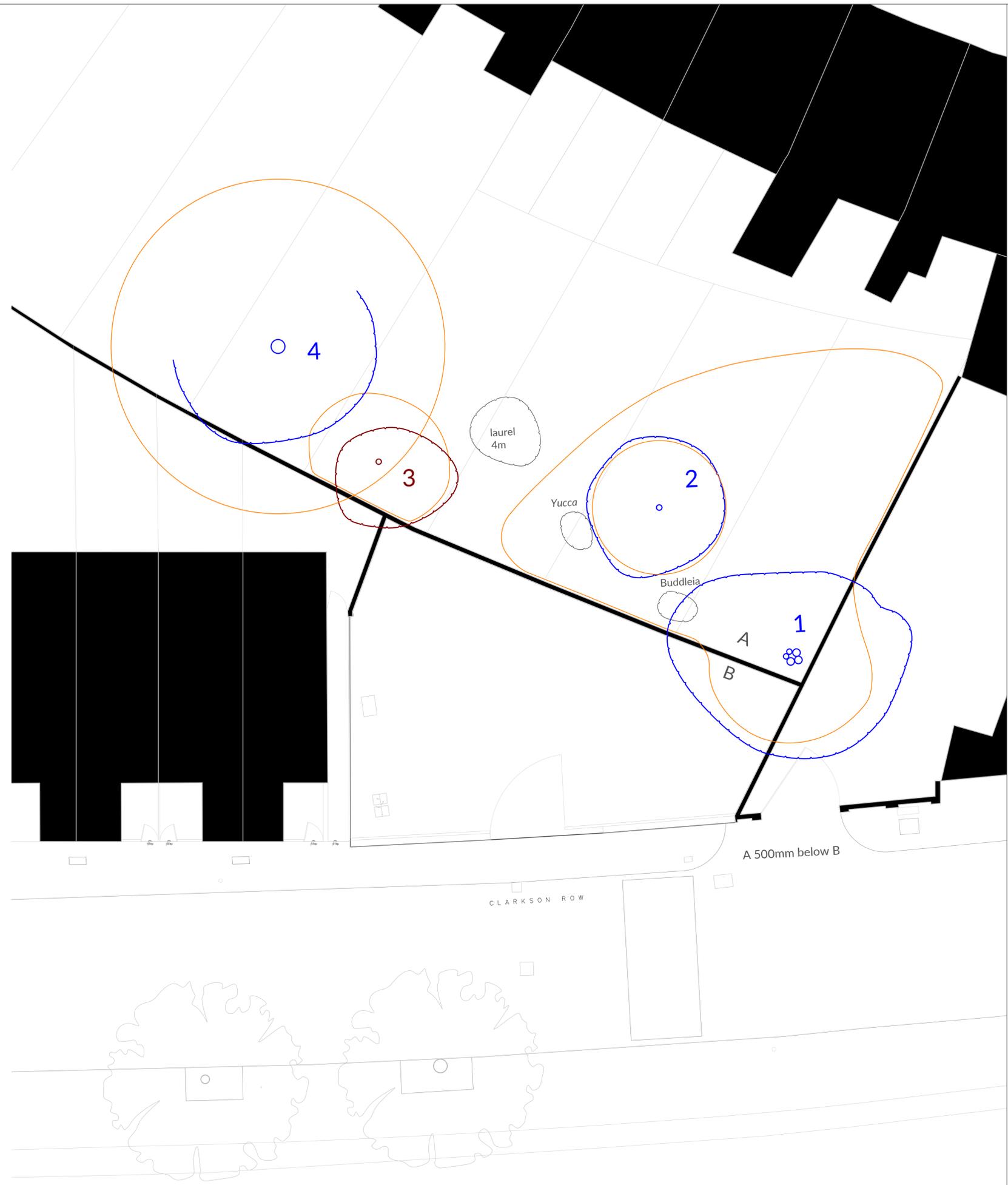
DRG. NAME  
TREE VALUE ASSESSMENT AS PER  
BS 5837:2012 & ROOT PROTECTION  
AREAS

TEXT  
FOR FULL DETAILS OF TREE VALUE  
PLEASE SEE REPORT

BASED ON  
MWA DRG. NO.: 19068\_P1000  
SUPPLIED

SITE ADDRESS  
Clarkson Row, London, NW1 7RA

DRG. REF. S354-J1-P1	REV. NO. v3
SCALE & SIZE 1:100 @ A1	DATE 12-Nov-20
0	5



# PREPARATION / DEMOLITION

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OR

If loads exceed that of pedestrians, a 2D geotextile membrane, such as 'Ekotex' shall be laid; 150mm of green-source woodchip; continuously abutted scaffold boards and a layer of manufactured board at least 25mm thick screwed to the underlying scaffold board so as to completely cover this area. This area may be used for pedestrian-operated plant up to 2 tonnes in weight.

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## Method 3 : SERVICE TRENCHES

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# LATE CONSTRUCTION and LANDSCAPING PHASE

## Method 5 : GROUND PREPARATION FOR TREE PLANTING AREAS

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## Method 7 : REPLACEMENT

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KEY TO COLOURS /  
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BLUE - Moderate Value (B)  
BLACK - Low Value (C)  
RED - Remove/Very short  
life expectancy (U)  
ORANGE SHAPES: Root  
Protection Areas

Spread and trunk colours  
correspond directly to  
those used in British  
Standard 5837:2012,  
Table 2.

TOOTHED LINE: Tree spread line

## NOTES

Do not use for setting out purposes.  
All dimensions to be checked on site.

DRG. NAME  
TREE RETENTION & TREE  
PROTECTION MEASURES

TEXT  
FOR FULL METHOD DETAILS  
PLEASE SEE REPORT

BASED ON  
MWA DRG. NO.: 19068\_P2000  
SUPPLIED

SITE ADDRESS  
Clarkson Row, London, NW1 7RA

DRG. REF. S354-J1-P2  
SCALE & SIZE 1:100 @ A1  
REV. NO. v4  
DATE 23-Nov-20  
0 5