

1-38-3012/2



JOHN CROMAR'S
ARBORICULTURAL
COMPANY
LIMITED

•
SUITE 6D,
BRITANNIA HOUSE,
LEAGRAVE ROAD,
LUTON, BEDS.,
LU3 1RJ
TEL 01582 80 80 20
FAX 01544 231 006
MOB 07860 453 072

•
admin@treescan.co.uk
www.treescan.co.uk

REPORT

on the impact on trees
of proposals for development

at

9, Templewood Avenue, London, NW3 7UY

(20th December 2012)

Registered Consultant of the Arboricultural Association
John Cromar, Dip. Arb. (RFS), F.Arbor A.



Company Registration No. 5195523. Registered in England and Wales.
Registered Office: 2 Water End Barns, Water End, Eversholt, Beds., MK17 9EA

01

Introduction and Instructions

I am instructed by XUL Architecture to make an assessment of tree amenity value and condition of trees, at 9 Templewood Avenue, London, NW3 7UY, and of the impact of a proposal for development on such trees. Accordingly, I visited the property on 14th August, 2012 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

1-38-3012/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. Assessment of value in the TREE DETAILS table appended is, in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' 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

1-38-3012/P2A 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 refs:

Greenspace drg. 17228_01-02_PES

XUL drg. no. PA-02 rev. 08

Construction Management plan-44

05

Appraisal

05.01

AMENITY / SCREENING BY TREES AND SHRUBS

Certain trees are of some general public amenity value, as they are at the front of the property, and therefore visible from Templewood Avenue. However, most trees are of strictly local amenity value to owners / users of the site, and to those of adjoining properties.

05.02

TREES AND LAYOUT - POTENTIAL FOR CONFLICT WITH ROOTS

(Details appear in the tree detail table appended.) The figures in columns 6 and 7 in the tree details table appended indicate the root protection area ('RPA'), 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). 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

An assessment as per BS5837:2012 section 4.6.2 has been carried out in connection with all trees to be retained. (This section requires that site conditions, tree mechanics, etc., are taken into account in determining the likely position of roots.)

05.04

FOOTING DESIGN

Some minor encroachment on the RPA of certain retained trees is entailed, as analysed in the table below :

No.	Tree	RPA in sq.m.	Area sq.m affected	Percentage of RPA affected	Notes
X17	horse chestnut	289.53	12.75	4.40	Area of swimming pool and paved area. Almost all of this area is surface-only paving.

To put the above in arboricultural context, trials made by the Morton Arboretum found that up to 30% of the root system of mature trees could be cut without any difference in shoot elongation or vitality resulting. BS 5837:2012 7.4.2.3 restricts permanent impermeable hard surfacing of any existing unsurfaced ground within the RPA of trees to be retained to 20% of the RPA. In this case the figure is only 4.4%. Temporary storage (during construction) is proposed within the RPAs of trees X17-X19. Arboricentric methods are proposed : all trees to be retained can be adequately protected by exclusion fencing and such methods as indicated below.

05.05

PERCEPTION OF TREES

The majority of the retained trees are located to the NW and SE of the habited parts of the proposed building. The proposal entails substantially increased glazing to the NW ground floor elevation. Trees 4 (a local authority-maintained tree), X17-X19 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 trees has been considered (as section 5.6.2.6 of BS 5837:2012 recommends) and appears not significant.

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 elevation drawings supplied that no conflict with the crown of retained trees will occur.

05.08

TREE REMOVAL and PLANTING

All visually important trees that also have reasonable longevity are retained. Tree 1 is an elderly native tree, of very short useful life expectancy, as noted in section 08 below, and has a strong lean. The removal of this tree is proposed. A replacement, of more suitable form for the location, is proposed : a cultivated variety of native common hornbeam. Shrub S2 is in obvious decline. A replacement, of suitable form for the location, is proposed : a large-growing architectural shrub. The proposed planting will play a useful role in providing for future public and local amenity. See plan for locations:

A= *Viburnum plicatum* 'Mariesii'

B= *Carpinus betulus* 'Frans Fontaine'

05.09

SUPERVISION

Supervision by an arboriculturist is a desirable (but not always essential) element of site development where trees are present and to be retained. Good communication between site agent and arboriculturist can reduce the need for such a measure. 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 method 1 in section 06.02 below.

05.10

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."

05.11

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

05.12

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 of significant public amenity value to be removed.

06

Tree Protection Proposals

06.01

TREE PROTECTION - GENERAL

It is highly important to tree health and vitality that construction activities are carried out strictly in accordance with the tree protection methods specified. A single traverse of a root protection area by a mechanical excavator can cause SIGNIFICANT and PERMANENT (albeit temporarily invisible) damage to trees. Such machinery, including piling rigs, shall be kept at ALL times outside the root protection areas as indicated in the tree details table appended, and/or shall be subject to SPECIAL 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.

06.02

TREE PROTECTION – SPECIAL METHODS 1-7

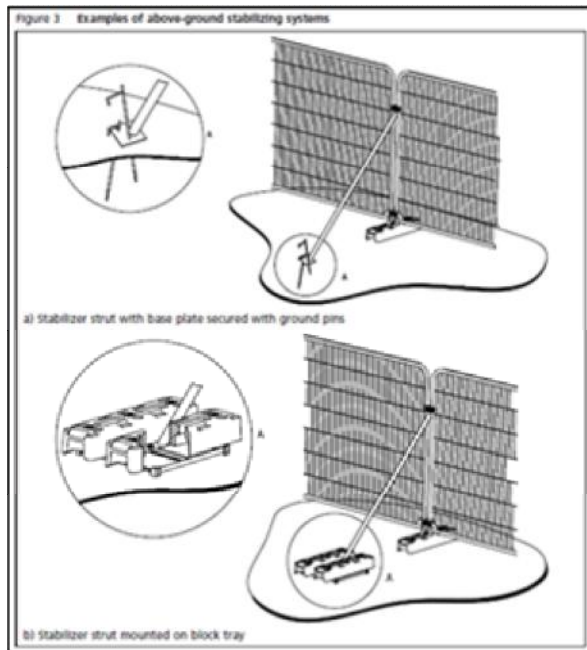
PLEASE READ WITH PLAN REFERENCE 1-38-3012/P2A, APPENDED.

Method 1 : Supervision by an arboriculturist shall take place at key points in the construction process, and additionally whenever required by the architect 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. Ensure 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 huts, mixing sites for mortars, disposal-to-skip sites, etc., are located appropriately, and sign off.
- 2) Supervise lifting of hard surfacing near trees.
- 3) Supervise laying of geotextile combination ground protection and sign off.
- 4) Attend as required to supervise digging for and the laying of lighting cable ducts or services.
- 5) Approve timing of removal of protective fencing (post main phase) and sign off.

Method 2 : Tree work shall be in accordance with good arboricultural practice, to BS 3998:2010 'Tree Work - Recommendations'.

Method 3 : Tree protection fencing shall be erected, consisting of 'Heras' type fencing (weld-mesh panels), each section securely attached to uprights driven at least 0.6m into ground, as per the layout as shown on the plan (pink lines). The standard rubber supports ('elephant's feet') shall if used, be as per BS 5837:2012 section 6, figure 3 (overleaf left). Below the crowns of trees with branches extending to less than 2m above ground level, in order to avoid unnecessary pruning, it is



permissible to replace sections with manufactured boards at least 11mm thick (hoarding), attached securely to timber uprights driven at least 0.6m into the ground, providing the finished fence stands at least 1.5m above ground level.

Method 4 : This method shall apply in the zone hatched **blue** on plan. No reduction in levels shall take place. Heavy - duty impermeable membrane and then continuously abutted scaffold boards or manufactured boards shall be laid so as to completely cover these zones. Any finishing paving shall be laid open jointed on lime-free sharp sand or granite chippings

firmed to approx. datum by foot / hand-held tamper.

Method 5 : This method shall apply in the zone hatched **green** on plan. No reduction in levels shall take place. Suspended decking shall be erected, supported by 100mm x 100mm timber pegs or timber baulks. On this formation, site huts may be erected or certain materials stored. No below-ground connections shall be made, e.g. to toilets : all such piping shall lie above ground. Rainwater collected from any such roof shall be piped back through a system of ducts that spreads the water evenly to the whole ground surface that lies below the formation. Any area not covered by site huts shall be covered by a non-slip, permeable covering. Light storage of dry, non-soluble materials only shall take place. No cement dust shall be stored in this location.

Method 6 : This method shall apply after completion of main build only. Screened topsoil (to BS3882:2007- multi-purpose topsoil) shall be laid to a minimum depth of 0.4m within 1.3m of the trunk location of each tree or shrub to be planted. Soil handling of any kind in the planting areas 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.

Method 7 : In addition to the above, careful general operation and site handling shall be observed as outlined at 06.03 below.

06.03

GENERAL TREE PROTECTION METHODS

- A) No fires shall be made on any part of the site, or within 20m of any tree to be retained.
- B) No spilling or pouring of fuels, oils, solvents, tar shall be made on any part of the site.

- C) No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- D) No storage of materials shall be made within the protective fences.
- E) No breaching or moving of the protective fences without the approval of an arboriculturist.
- F) Services, if planned to be laid in the root protection areas, (and which notionally appears unnecessary in this case) shall be laid using trenchless 'no dig' methods or by hand dug trenches to avoid cutting major roots.
- G) Alterations in levels within the tree protection fence areas shall be avoided.

06.04

It is recommended that acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in.

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.

20th December 2012

Signed:



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

01582 808020 / 07860 453072

APPENDICES

08 TREE DATA

Tree number prefix(es)	Tree number	Tree type	Height	Number of stems	Stem diameter (combined if applicable) (mm)	Radius of RPA if circle (mm)	RPA (m ²)	Comments	Life expectancy (years)	Assessed BS5837 value category
	1	whitebeam	11	1	600	7200	163	Old tree. Strong lean. Ivy infested. Leaf size is rather small and the tree is below normal crown density. Remove.	< 10	U
S	2	laurel	6	2	444	5329	89	In decline : much dead wood. Remove.	< 10	U
	3	ash	9	1	180	2160	15		> 40	B2
	4	horse chestnut	10	1	420	5040	80	Local authority-maintained. Bleeding canker noted.	20–40	C2
	5	Japanese maple	2	2	106	1276	5	Extremely small tree.	10–20	C2
	6	date palm	7.5	1	300	3600	41		10–20	C2
	7	apple	4	1	80	960	3		10–20	C2
	8	apple	4	1	70	840	2		10–20	C2
	9	tree Cotoneaster	6	3	99	1194	4		10–20	C2
	10	<i>Amelanchier</i>	5	3	132	1583	8		10–20	C2
G	11	apples	5	1	100	1200	5	Less than 100mm trunk diameters.	10–20	C2

Tree number prefix(es)	Tree number	Tree type	Height	Number of stems	Stem diameter (combined if applicable) (mm)	Radius of RPA if circle (mm)	RPA (m ²)	Comments	Life expectancy (years)	Assessed BS5837 value category
G	12	Leyland cypress	11	1	250	3000	28	+ 4 others less than 250mm diameter	20–40	C2
	13	wild cherry	0	1	250	3000	28	Strong lean. Rather inaccessible.	<10	U
	14	<i>Thuja</i>	6	1	120	1440	7		10–20	C2
H	15	<i>Thuja</i> and Leyland cypress hedge	8	1	140	1680	9		20–40	C2
	16	mulberry	6	1	250	3000	28	Almost dead.	<10	U
X	17	horse chestnut	14	1	800	9600	290	Outside site. <i>Cameraria ohridella</i> infestation prominent. Part of the trunk is obscured by the yew hedging. Nothing abnormal detected at the base. A light has been fixed to the tree: this is not ideal although decay does not typically result from such fixtures. The main unions of the tree were more or less visible from ground level and appear to be normal with no sign of mechanical weakness noted.	20-40	B2
X	18	horse chestnut	14	1	760	9120	261	Outside site. <i>Cameraria ohridella</i> noted. The base of the tree was inspected and a major branch union was noted at 3.5m above ground level: nothing abnormal was detected.	20-40	B2

Tree number prefix(es)	Tree number	Tree type	Height	Number of stems	Stem diameter (combined if applicable) (mm)	Radius of RPA if circle (mm)	RPA (m ²)	Comments	Life expectancy (years)	Assessed BS5837 value category
X	19	horse chestnut	14	1	970	1164	426	Outside site. A minor cavity was noted at the base which was inspected and no significant decay was found to be associated with it. Major branch unions noted at 2m & 3m above ground level and a degree of included bark was noted on the upper one. This pattern repeats at 5m above ground level. Full inspection of the crown was not possible due to the crown being in full leaf at the time of inspection.	20-40	B2

Trees at 9 Templewood Avenue, London, NW3 7UY

Please read in conjunction with plan 1-38-3012/P2A.

Tree number prefix(es)	Tree number	Tree type	Height	Number of stems	Stem diameter (combined if applicable) (mm)	Comments
	1	whitebeam	11	1	600	Remove, grind stump to below ground level.
S	2	laurel	6	2	444	Remove, grind or grub out stumps.
	5	Japanese maple	2	2	106	

NOTES:

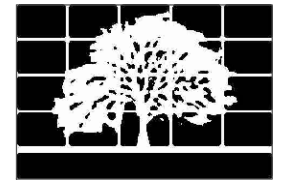
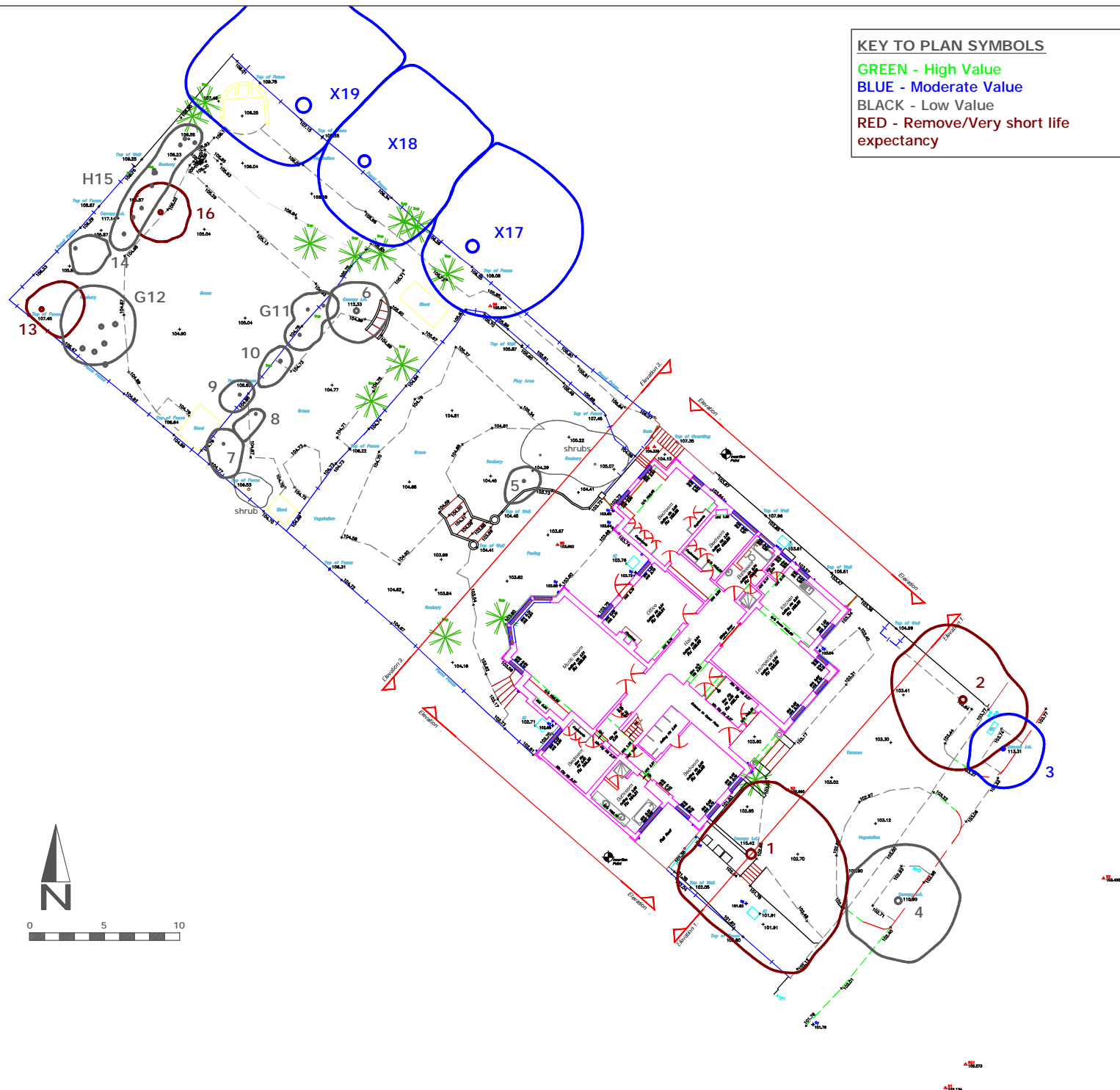
All tree work should be carried out to BS 3998 : 2010 'Tree Work - Recommendations'. The Wildlife and Countryside Act 1981 protects with certain exceptions all birds and their nests. It is an offence to destroy such nests or take or injure such birds in the course of tree works operations. If a tree 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

1-38-3012/P1

1-38-3012/P2A



**JOHN CROMAR'S
ARBORICULTURAL
COMPANY
LIMITED**

BRITANNIA HOUSE,
LEAGRAVE ROAD,
LUTON, BEDS.,
LU3 1RJ
TEL 01582 808020
FAX 01544 231006
MOB 07860 453072

eng@treescan.co.uk
www.treescan.co.uk

**TREE VALUE
ASSESSMENT**
as per BS5837:2012

for full details of
tree value see report
reference TC/1-38-3012

9, Templewood Avenue,
London,
NW3 7UY

based on Greenspace
drg. 17228_01-02_PES
supplied

ref: 1-38-3012/P1
1:250 scale @ A3
Aug 2012

KEY TO PLAN SYMBOLS

PINK LINES: Tree Protection Fencing
 ORANGE CIRCLES: Root Protection Areas
 DARK BLUE HATCH: 'boarding out' method - see report ref. TC/1-38-3012
 BROWN FILL: special method - see report ref. TC/1-38-3012
 GREEN HATCH: special method - see report ref. TC/1-38-3012



JOHN CROMAR'S
 ARBORICULTURAL
 COMPANY
 LIMITED

BRITANNIA HOUSE,
 LEAGRAVE ROAD,
 LUTON, BEDS.,
 LU3 1RJ
 TEL 01582 808020
 FAX 01544 231006
 MOB 07860 453072

eng@treescan.co.uk
www.treescan.co.uk

TREE RETENTION and TREE PROTECTION MEASURES

for fuller details of
 protection measures
 see report reference
 TC/1-38-3012

9, Templewood Avenue,
 London, NW3 7UY

based on XUL drg. no.
 PA-02 rev. 08 supplied

ref: 1-38-3012/P2A
 1:250 @ A3 scale
 Dec 2012

TREES 1, 2, 5: NOT
 RETAINED

A & B = Proposed
 replacement planting
 - see report ref.
 TC/1-38-3012

