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Arboricultural and Planning Integration Report: Maria Fidelis School, 34 Phoenix Road, London NW1 1TA

10th May 2019

Ref: GHA/DS/17660:19

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Arboricultural Report

Location: Maria Fidelis School, 34 Phoenix Road, London NW1 1TA
Ref: GHA/DS/17660:19
Client: Maria Fidelis School
Date: 10th May 2019
Report Prepared by: Glen Harding MSc (Forestry), MArborA
Date of Inspection: 15th August 2019

Please note that abbreviations introduced in (brackets) *may be used throughout the report.*

Instructions

Issued by – Maria Fidelis School

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to Maria Fidelis School, 34 Phoenix Road, in order to assess their general condition and to provide a planning integration statement for the indicative proposed development that safeguards the long term well being of the retained trees in a sustainable manner.

Executive Summary

The proposal for the site is to demolish some of the existing buildings and then construct a new Construction Skills Training Centre (CSC). The proposal will also refurbish the existing Maria Fidelis School into managed Workspace and a multiuse hall and provide Temporary Open Green Space. The proposed scheme requires the removal of a small number of trees and shrubs, which will not significantly impact the local or wider landscape. The development presents an excellent opportunity to plant some new trees, to enhance the site and local area for the future. The retained trees require protection in accordance with industry best practice and BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations, in order to ensure their longevity.

Documents Supplied

Maria Fidelis School supplied the following documents:

1. Existing layout plans
2. Proposed layout plans
3. Existing elevation plans
4. Proposed elevation plans

Scope of Survey

1.1 The survey is concerned with the arboricultural aspects of the site only.

1.2 The planning status of the subject property was not investigated in detail.

1.3 A qualified Arboriculturist undertook the report and site visit and the contents of this report are based on this. Whilst reference may be made to built structure or soils, these are only opinions and confirmation should be obtained from a qualified expert as required.

1.4 No discussions took place between the surveyor and any other party.

1.5 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breleor (The body language of tree, DoE booklet Research for Amenity Trees No. 4, 1994)

1.6 The survey was undertaken in accord with British Standard 5837: 2012 – Trees in relation to design, demolition and construction – recommendations.

1.7 Underground services near to trees will need to be installed in accord with the guidance given in BS5837 together with the National Joint Utilities Group Booklet 4: 2007 Guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG4).

1.8 The client's attention is drawn to the responsibilities under the Wildlife and Countryside Act (1981).

Survey Method

2.1 The survey was conducted from ground level with the aid of binoculars if needed.

2.2 No tissue samples were taken nor was any internal investigation of the subject trees undertaken.

2.3 No soil samples were taken.

2.4 The height of each subject tree was estimated using a clinometer and recorded to the nearest half metre.

2.5 The stem diameter for each tree was measured in line with the requirements set out in BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations.

2.6 The crown spreads were measured with an electronic distometer and recorded to the nearest half metre. Where the crown radius was notably different in any direction this has been noted on the Plan (appendix A) and within the tree table (Appendix B). The crowns of those trees that are proposed for removal, or trees where the crown spread is deemed insignificant in relation to the proposed development are not always shown on the appended plan; however their stem locations are marked for reference.

2.7 The Root Protection Area (RPA) for each tree is included in the tree table, both as an area, and as the radius of a circle.

2.8 The crown clearance was measured using a clinometer and recorded to the nearest half metre. Where it is significantly lower in one direction, this is noted within the tree table at appendix B.

2.9 All of the trees that were inspected during the site visit are detailed on the plan at Appendix A; this plan was produced in colour and **MUST** only be scanned or reproduced in colour. The trees on this plan are categorised and shown in the following format:

COLOUR CODING AND RATING OF TREES:

Category A – Trees of high quality with an estimated remaining life expectancy of at least 40 years. Colour = light green crown outline on plan.

Category B – Trees of moderate quality with an estimated remaining life expectancy of at least 40 years. Colour = mid blue crown outline on plan.

Category C – Trees of low quality with an estimated remaining life expectancy of at least 40 years, or young trees with a stem diameter below 150mm. Colour = uncoloured crown outline on plan.

Category U – Those in such a condition that they cannot realisitically be retained as living trees in the context of the current land use for longer than 10 years. Colour = red crown outline on plan.

All references to tree rating are made in accordance with BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations', Table 1.

The Site

3.1 The site is located on Phoenix Road, a residential through road located in the Regents Park area of North London.

The Subject Trees

4.1 The details of the subject trees are set out in the Schedule at Appendix B.

4.2 The overall quality of the trees is good.

4.3 Of the twenty individual trees, and groups of trees surveyed, nine have been assessed as BS 5837 category B, ten have been assessed as BS category C, C with the remaining tree being assessed as BS 5837 category U.

Category B	9 trees
Category C	10 trees
Category U	1 tree

The Proposal

5.1 The proposal for the site is to demolish some of the existing buildings and then construct a new Construction Skills Training Centre (CSC).

5.2 The proposal will also refurbish the existing Maria Fidelis School into managed Workspace and a multiuse hall and provide Temporary Open Green Space.

5.3 The proposed location of the above structures can be seen on the appended plan.

Arboricultural Impact Assessment

PROPOSED TREE REMOVAL / RETENTION:

6.1 The following trees are proposed for removal as part of the new development, as these specimens could not be effectively retained due their positions in relation to the proposed site layout.

G5, T14, T15, T16, T17, T18, G19 and T20

6.2 The assessed grading (as per BS5837 table 1) of each of the trees to be removed, as well as any relevant comments on their condition can be seen in the tree table at appendix B.

TREE PRUNING TO ACCOMODATE THE PROPOSAL OR ACCESS TO THE SITE

6.3 The implementation of the proposal does not lead to the requirement to prune any of the retained trees, or shrubs.

6.4 There is no part of the new structure which will have tree canopies (from trees to be retained) overhanging it and the building works can progress safely without the need for any facilitation pruning.

ASSESSMENT OF RETAINED TREES ROOT PROTECTION AREAS

6.5 Section 4.6.3 of BS 5837: 2012 states that the Root Protection Area (RPA) of each tree should be assessed by an arboriculturalist considering the likely morphology and disposition of the roots, when known to be influenced by past or existing site conditions.

6.6 Several RPAs have been amended to take account of the existing structures as can be seen on the appended plan.

6.7 The other RPAs have been drawn as notional circles, as there are no structures within their RPAs that have been assessed to significantly impact the root layout.

6.8 The proposed new building(s) are situated outside of the assessed RPA's of all of the trees proposed for retention, therefore these trees pose no below ground constraints on the new buildings or vice versa.

INSTALLATION OF SERVICES

6.9 The installation of underground apparatus and drainage systems with the use of mechanical excavators will undoubtedly sever any roots that may be present and can change the hydrology and structure of the nearby soil in a way that will adversely affect the health of any nearby trees. Particular care should therefore be taken when assessing the layout of new services and consideration **MUST** be given to the methods of installation of **ALL** underground apparatus.

6.10 New services should be routed to avoid all RPAs of retained trees on site and within nearby sites. From an assessment of the subject site, undertaken in conjunction with the project architect, there is no reason to assume this isn't possible. Inspection chambers must also be sited outside the RPAs of any nearby trees.

GENERAL

6.11 The protective measures as detailed in section 8 will ensure that no significant root severance or soil compaction / erosion occurs near the retained trees.

Post Development Pressure

FUTURE TREE AND STRUCTURE RELATIONSHIPS

7.1 The retained trees are at a satisfactory distance from the proposed new building, and highly unlikely to give rise to any inconvenience.

7.2 Some minor lateral pruning of the retained trees and shrubs may be required in the medium term, however any such work would not have a significant impact on the health or amenity value of these trees.

7.3 The BS3998: 2010 – Recommendations for Tree Work discusses and endorses various methods of pruning that can alleviate the minor inconveniences trees can cause, whilst retaining them in a healthy condition. Methods such as crown reductions (section 13.4) partial or whole, crown lifting (section 13.5) and crown thinning (section 13.6) can be used to both increase light to properties, as well as improve clearances from buildings. Trees in towns are often sited in close proximity to buildings; however residents concerns can be readily appeased with the implementation of regular, well-planned, sensitive pruning.

7.4 Regular inspections of the retained trees by a suitably qualified Arboriculturalist and subsequent remedial works will ensure that the trees are maintained in a suitable manner, to exist in harmony with the new structures and its occupants for many years to come.

REMEDIATION / REPLACEMENT PLANTING AND SOFT / HARD LANDSCAPING

7.5 Any new trees that are planted should be selected to ensure they do not become a nuisance and that the level of routine maintenance is low.

7.6 The soil type may require the guidance of NHBC as far the building foundations are concerned. Clearly the planting schedule must be available to assist with foundation design, but any potential for subsidence damage in the future will be designed out.

7.7 All new pathways and soft landscaping areas within the Root Protection Areas (RPA's) of the retained trees should be designed using no-dig, up and over construction and in close co-ordination with the retained Arboriculturalist using porous materials.

Tree Protection Measures and Preliminary Method Statement for Development Works

8.1 TREE PRUNING / REMOVAL

A list of all tree works that are required (including trees to be removed) is included in the tree table at Appendix B. Pruning / removal has only been specified for the following reasons:

- Where work is necessary to implement the proposed scheme.

- Where works are required for safety reasons.
- Where work is required to improve tree form, or improve the appearance of overgrown areas of the site.

Where any tree work is needed, this work will be in accordance with British Standard 3998 – 2010 (Tree Work - Recommendations).

8.2 TREE PROTECTION BARRIERS

It is essential for the future health of the trees to be retained on site, that all development activity is undertaken outside the root protection zone of these trees, whenever this is practical. The position of the fence is to be marked out with biodegradable marker paint on site and agreed with appropriate representatives from the LPA and contractor. The fencing will be erected **prior** to any works in the vicinity of the trees and removed only when all development activity is complete. The protective fencing will be as that shown in BS 5837 (see Appendix C). The herras panels must be joined together using a minimum of two anti-tamper couplers which must be installed so they can only be removed from the inside of the fence. The panels should supported by stabilizer struts, which must be installed on the inside and secured to the ground using pins or appropriate weights.

The Fence must be marked with a clear sign reading:

"Construction Exclusion Zone – No Access"

8.3 DELIVERY AND STORAGE OF BUILDING MATERIALS

Due to the limited on-site storage space, it may be necessary for bulk deliveries to be split into smaller deliveries. The use of a "just in time" delivery method can also be adopted to reduce the time materials are stored on site before use.

8.4 SITE HUTS, WELFARE FACILITIES AND STORAGE OF EQUIPMENT, MATERIALS AND CHEMICALS

All site huts will be positioned outside of the retained trees RPA's.

8.5 MIXING OF CONCRETE

All mixing of cement / concrete must be undertaken outside of the RPA of all of the retained trees.

8.6 USE CRANES, RIGS AND BOOMS

Precautionary measures must be observed to avoid contact of any retained trees when manoeuvring cranes rigs or booms into position.

8.7 INCOMING SERVICES, DRAINAGE AND SOAKAWAYS

New services **MUST** be routed to avoid all RPAs of retained trees on site and within nearby sites. From an assessment of the subject site, undertaken in conjunction with the project architect, there is no reason to assume this isn't possible. Inspection chambers **MUST** be sited outside the RPA.

8.8 ON SITE SUPERVISION

Regular site supervision is essential to ensure all potentially damaging activities near to trees are correctly supervised. A pre start meeting will occur to ensure all parties are aware of their responsibilities relating to tree protection on site; this will include a site induction for key personnel.

8.9 OTHER TREE PROTECTION PRECAUTIONS

- No fires lit on site within 20 metres of any tree to be retained.
- No fuels, oils or substances with will be damaging to the tree shall be spilled or poured on site.
- No storage of any materials within the root protections zone.

8.10 HARD / SOFT LANDSCAPING NEAR RETAINED TREES

All new pathways and hard landscaping areas within the Root Protection Areas (RPA's) of the retained trees should be designed using no-dig, up and over construction techniques, and be specified in close co-ordination with the retained Arboriculturalist. Porous materials should also be used when surfacing near the trees. No machinery will be used for this work, which must all be done by hand.

8.11 TREE PLANTING

Some proposed locations for new trees can be seen on the architect's plans. Any new trees should be of a minimum 14/16 cm girth and purchased from a reputable nursery. Tree planting should be undertaken between the months of November and March by a suitably experienced contractor. The scheme should include the implementation of an aftercare package to include: weed management, tree hydration, stake and tie maintenance, replacement of any failures, mulching and formative pruning.

8.12 DISMANTLING PROTECTIVE BARRIERS

Protective barriers must only be completely removed when all machinery, and equipment has left site. A minimum of seven days notice must be given to the local planning authority prior to dismantling works begin.

Conclusion

9.1 Subject to precautionary measures as detailed above, the proposal will not be injurious to trees to be retained.

9.2 There will be no appreciable post development pressure, and certainly none that would oblige the council to give consent to inappropriate tree works.

9.3 New trees and shrubs can be planted following approval from the Local Planning Authority to ensure a sustainable tree stock for the future.

Recommendations

10.1 Site supervision – An individual e.g. the Site Agent, must be nominated to be responsible for all arboricultural matters on site. This person must:

a. Be present on the site the majority of the time.
b. Be aware of the arboricultural responsibilities.

c. Have the authority to stop any work that is, or has the potential to cause harm to any tree.
d. Be responsible for ensuring that all site personnel are aware of their responsibilities towards trees on site and the consequences of the failure to observe those responsibilities.
e. Make immediate contact with the local authority and / or retained arboriculturalist in the event of any related tree problems occurring whether actual or potential.

10.2 It is recommended, that to ensure a commitment from all parties to the healthy retention of the trees, that details are passed by the architect or agent to any contractors working on site, so that the practical aspects of the above precautions are included in their method statements, and financial provision made for these.

10th May 2019
Signed:

Glen Harding MSc (Forestry), MArborA
For and on behalf of GHA Trees

Appendix A

Appendix B

Tree No.	Tree Species	Height (m)	Diameter at 1.5m (mm)	Branch Spread				First Significant Branch	Height of Canopy	Life Stage	Remaining Useful Life (Yrs)	Observations & Preliminary Recommendations	Category Grading	Root Protection Area - Radius (m)
				N	S	E	W							
T1	Common Elder (*Sambucus nigra*)	9	350 220 120	3	3	3	3	1	1	LM	10+	Neglected shrub, main stem trifurcates at 0.5m. No work required at present.	C1	5.10
G2	Mixed Broadleaves	5	150	1	1	1	1	2	2	Y	40+	Group of small trees. No work required at present.	C1	1.80
T3	Aspen (*Populus tremula*)	18	420	4.5	4.5	4.5	4.5	5	5	M	20+	Ivy clad tree with trifurcation at 4m. No work required at present.	B1	5.10
T4	Aspen (*Populus tremula*)	18	260 190	5	5	5	2	5n	5	EM	40+	Main stem forks at ground level and 1.2m, tight forks. No work required at present.	B2	3.90
G5	Hawthorn/ Hornbeam	11	240	2	4.5	3	3	3e	3	EM	40+	Group of three close grown trees - one very small. Recommend: to be removed.	B1	3.00
T6	Field Maple (*Acer campestre*)	9	300	5	5	5	5	3	3	EM	40+	Growing in hard surface, crown touching building. No work required at present.	B1	3.60

T7	Maidenhair Tree (*Ginkgo biloba*)	3	40	0.5	0.5	0.5	0.5	2	2	Y	40+	Staked young tree growing in hard surface. No work required at present.	C1	0.50
T8	Rowan (*Sorbus aucuparia*)	9.5	220	2.5	2.5	2.5	2.5	3	3	EM	20+	Growing in hard surface, no other significant features. No work required at present.	B1	2.70
T9	Cherry var. (*Prunus* sp.)	7.5	190	3	3	3	3	3	3	EM	20+	Growing in hard surface, no other significant features. No work required at present.	B1	2.40
T10	Maidenhair Tree (*Ginkgo biloba*)	3	70	1	1	1	1	2	2	Y	40+	Staked young tree growing in hard surface. No work required at present.	C1	0.90
T11	Rowan (*Sorbus aucuparia*)	11	220	2.5	2.5	2.5	2.5	2.5	2.5	EM	40+	Growing in hard surface, no other significant features. No work required at present.	B1	2.70
T12	Silver Birch (*Betula pendula*)	8	180	2.5	2.5	2.5	2.5	3	3	EM	40+	Growing in hard surface, significant bark damage 0-2m south. No work required at present.	C1	2.10

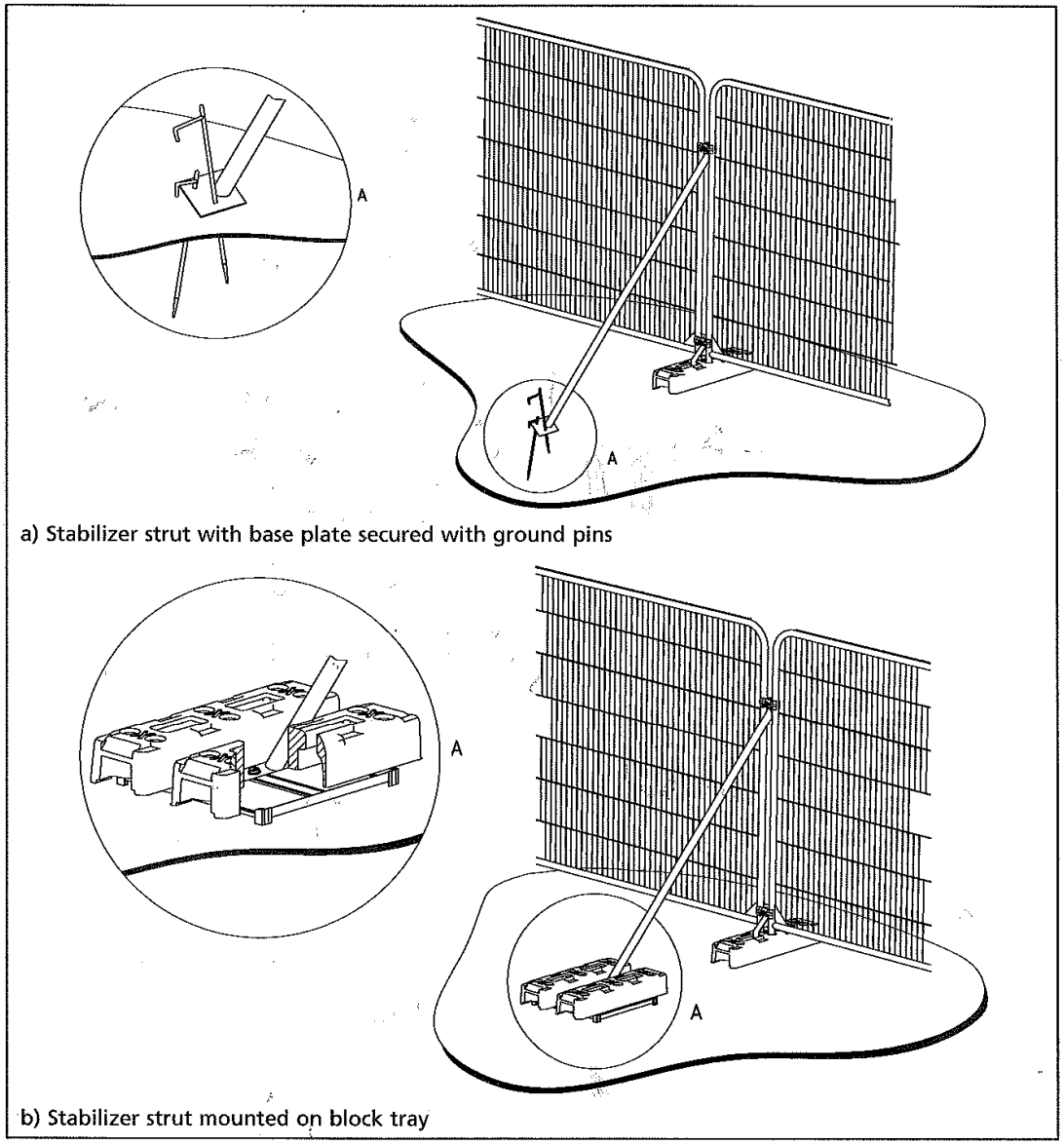
T13	Cherry var. (*Prunus* sp.)	11.5	670	4	4	5	4	4	4	LM	20+	Heavily pruned tree partially growing in hard surface. No work required at present.	C1	8.10
T14	Guelder Rose (*Viburnum opulus*)	4.5	180	2	2	2	2.5	2	2	M	20+	Growing in sunken garden, trifurcates with tight included forks at 1.1m. Recommend: to be removed.	B1	2.10
T15	Plum var. (*Prunus* sp.)	6	220	4	2	4	2	3	3	M	<10	Growing in sunken garden, suppressed tree with low vitality and significant areas of dysfunctional bark. Recommend: to be removed.	U	2.70
T16	Field Maple (*Acer campestre*)	12	280 250	3	4	4	4	3	3	M	40+	Growing in sunken garden, tight included main fork with adaptive growth at 0.5m, crown touching building. Recommend: to be removed.	B1	4.50
T17	Pissard's Plum (*Prunus cerasifera*)	9	290	3	3	3	3	3	3	M	10+	Growing in sunken garden, forks at 1.2m. Recommend: to be removed.	B1	3.60

T18	Hawthorn (*Crataegus monogyna*)	7	170	1	3	2	2	4	4	EM	40+	Growing in sunken garden, previously pollard at 2m. Recommend: to be removed.	C1	2.10
G19	Common Elder (*Sambucus nigra*)	6	190	3	3	3	3	4	4	EM	20+	Two self set trees/shrubs growing in sunken garden. Recommend: to be removed.	C1	2.40
T20	Apple var. (*Malus* sp.)	4	160	0	3	3	3	1.5	1.5	EM	20+	Neglected fruit tree growing close to wall growing in sunken garden. Recommend: to be removed.	C1	1.80

KEY :
Tree No: (T= individual tree, G= group of trees, W= woodland)
Age class: Young (Y), Middle aged (MA), Mature (M), Over mature (OM), Veteran (V)
Height (Ht): Measured in metres +/- 1m

Appendix C

Figure 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray