Arboricultural Report and Impact Assessment

Site – **161 West End Lane, London, NW6 2LG**

Client – **Henport Trading (UK) Ltd**

Contact – **Altaras Architects**

Date - **20-02-2023**

To be read in conjunction with – Tree Survey Plan Drawing No. MP/161W/01

MoorePartners Ltd

Contents BS5837:20012 Tree Assessment

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1.0 Scope of works and client brief.

1.1 Altaras Architecture has requested a survey of the trees to the rear of 161 West End Lane. The survey is to accompany the planning application for an extension to the rear elevation of the building. The report should be read in conjunction with the tree constraints and protection plan, drawing number AA/161W/01.

1.2 The report was to:

- assess the trees in line with BS5837:2012.
- prepare tree constraints plan.
- Address mitigation required as a result of the implications assessment.
- Provide an outline tree protection plan to demonstrate what level of retention and protection of the trees is feasible.

2.0 Summary

2.1 The site is a detached property, divided into apartments to the west side of West End Lane. There are 3 trees in the rear garden, 3 early mature sycamores along the rear boundary. These tree crowns are currently reduced cyclically following an insurance claim. These are visible from the surrounding properties. The fourth tree is an early mature Norway spruce, the has limited value in the wider landscape.

The proposals are for the construction of a single storey extension to the rear elevation of the building. Access for the build would be over the front garden and along a side access on the north of the site.

The building works are outside the crown spread and root protection areas of the trees. The trees would be protected by a construction exclusion zone for the duration of the build, enclosed by tree protection fencing in line with BS5837.
The implications assessment chart, section 7 of this report, outlines the implications and mitigation required for each tree.

The tree protection is installed in line with this report for the proposed works, it is considered there would not be an impact on the three most important tress within the site.

3.0 Site

3.1 The site is to the west side of West End Lane. It is a large, detached building converted into apartments. The front garden is laid to paving for car parking and is accessed directly from West End Lane. The rear garden is accessed by a pedestrian access to the north of the building. It is laid to lawn. There are three trees along the rear boundary, all sycamores. The trees are in a bed of dense blackberry scrub which limited some access to them for the survey. They are managed by regular pruning because of an insurance claim. Within the lawn is a fourth smaller tree a Norway spruce.

fig 1 – survey site outlined in red.

3.2 Soils and levels

The site is relatively level.

A desk top survey shows the soils in the area are slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils as shown by the Cranfield Soil Institute; source Landis.org. Bedrock geology is London Clay Formation, source British Geological Survey. This is a generic desk top analysis and not a detailed soil survey.

4.0 Statutory protection

4.1 Trees legislation

Tree Preservation Order (TPO)

Can be served on individual trees or groups of trees. The law requires written permission to be gained from the local authority prior to carrying out any works to a tree either above or below grounds. Failure to gain consent can be seen as wilful damage and lead to prosecution and significant fines. It remains the tree owner's responsibility to check TPO status prior to carrying out any works.

Conservation Area Order

If a site lies within a conservation area designated by the local authority, trees over 75mm in stem diameter 1.5m high, are afforded protection under this statutory designation. The local authority must be notified in writing of any proposed works to a tree in a conservation area, or any activity that could affect the above or below ground parts of the tree. They have 6 weeks in which to object to the proposed works. Failure to comply with this can lead to prosecution and a fine.

Town and Country Planning Act 1948

The local planning authority has duty to ensure that when granting planning permission 'adequate provision is made for the preservation and planting of trees. This can include imposing planning conditions.

National Planning Policy Framework Section 11

This states that 'the local planning system should contribute to and enhance the natural and local environment by protection and enhancing valued landscape.' This includes recognising the benefits of ecosystem services and protecting biodiversity through protection and enhancement.

4.2 Wildlife legislation

There are statutory protections on British fauna. In particular bats and nesting birds can be impacted on when undertaking works on and around trees. Any works to trees should carry out checks and comply with current legislation.

Bats

All British bats, as well as their roosts and breeding sites are protected under British Law. The Wildlife and Countryside Act 1981 schedule 5 and The Habitat Regulations make it an offence to

- Deliberately disturb bats
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport a bat or any art of a bat

Birds

The Wildlife and Countryside Act 1981 makes it an offence to

- Intentionally kill injure or take a wild bird
- Destroy a nest while in use or take or destroy eggs.

Under **The Countryside Rights of Way Act** 'unknowingly' committing an offence is no longer a defence. It is therefore imperative that appropriate action is taken by the landowner, or contractor, prior to commencing any works on trees that could be potential nesting sites or bat roosting sites. This may include, but is not limited to, trees with cavities, splits or holes and heavy infestations of ivy, particularly in reference to bats. Appropriate risk assessments should be made before works commence by competent persons.

5.0 Proposed Development

5.1 The proposals are for the construction of a rear single storey extension, see Fig 2 and drawings by Altaras Architects.

Fig 2 – Proposed site layout and elevations

5.2 Reference documents supplied. Changes to documentation could render this report invalid.

Drawing references	Author	Title	Date
TH - WEL - P05	DA	Existing and Proposed Rear Elevations	Jan 2022
TH-WEL-P01	DA	Existing Plans	Jan 2023
TH - WEL - P03	DA	Proposed First Floor Plan	Jan 2022
TH - WEL - P02	DA	Proposed Ground Floor Plan and elevation rear	Jan 2022
TH - WEL -P04	DA	Proposed Second and roof floor plans	Jan 2022

6.0 Tree assessment

6.1 Survey method

The report is based on a ground level visual tree assessment, using recognised non-invasive techniques, (Mattheck). It is an external inspection only. Condition of the tree was assessed only on date of inspection. Physiological and structural assessments are valid for a period of no more 12 months. It remains valid only if no environmental changes occur around the tree. If any changes should occur, re-inspection should be carried out. Environmental changes around the tree will render the report invalid.
There has been no assessment of potential for indirect damage because of soil heave or subsidence that trees may have on existing properties, this is outside the remit of this report.
No internal diagnostic equipment was used, and no pest and disease samples were taken or sent away for analysis. No soil samples were taken for testing. If Soil analysis is required, a soil engineer should be employed. There has been no examination of existing drains or service runs for the presence of roots. No trial pits were dug to examine roots at the time of the tree survey.

The trees were surveyed in line with the process laid out in BS5837:2012. The trees were assessed against the criteria laid out in the British Standard. Data was collated on species, age, height, crown spread, stem diameter at 1.5m high. A base line assessment of physiological and structural condition was made. All trees were categorised in line with BS5837:2012 guidance. Trees of the highest quality were rated 'A', good quality 'B'. Trees rated 'C; are worthy of retention but of lower quality. Those given an 'R' rating are poor quality with either less than 10 useful life years remaining, small and of limited significance in the wider landscape, or could easily be replaced in a new landscape scheme with a tree of similar size and impact. Greater detail on the rating is given in the key in below.
Trees under 75mm in diameter were not recorded in line with BS5837 guidance. The details of the trees as required under BS5837:012 were recorded in tree data for this report.

Where trees have been noted for works an assessment of condition has been made but this survey is an overview and cannot be relied on as a full health and safety assessment of the trees.

A topographical survey was available for the tree positions within the site. The tree protection plan is based on this, and the current proposed site lay out available at the time of writing the report.

Key to survey schedule

Tree number on plan - T1 individual tree on the site

BS 5837:2012 Age class

Y – Young first third of life expectancy, EM – Early mature second third of life expectancy, Ma – Mature final third of life expectancy, OM – Over mature showing signs of senescence, V – Veteran over mature and of special conservation value

Remaining years in age bands - <10, 10-20, 20-40, >40

Physiological or structural condition - Good no significant health problems, or no significant structural problems, **Fair** some symptoms of ill health, or currently insignificant or remediable structural problems, **Poor** significant symptoms of ill health, or significant structural problems
Moribund (physiological only in serious and irreversible decline, **Dead** (physiological only) not alive

Other Abbreviations.

Esti estimated
M/S multi stem the number of stems and diameter are given in line with BS5837:2012 requirements.
N north, E east, S south, W west

BS 5837:2012 Category of quality/retention

Category	Description		
A Green	Trees of high quality A1 – Mainly arboricultural value A2 - Mainly landscape value A3 – Mainly cultural value, including conservation	C Grey	Trees of low quality C1 – Mainly arboricultural value C2 – Mainly landscape value. C3 – Mainly cultural value, including conservation
B Blue	Trees of moderate quality B1 – Mainly arboricultural value B2 - Mainly landscape value B3 – Mainly cultural value, including conservation	U red	Trees that are in a poor condition, so that any existing value will be lost in the next 10 years, and should, for reasons of sound arboricultural management, be removed.

6.2 Tree data

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
T1	*Sycamore* *Acer pseudoplatanus*	12	38	N 4.0 S 2.0 E 3.5 W 4.0	4 First main limb at 4m on the east and south side	Em	Fair	Fair Reduced regularly in the past to contain the crown spread. This is as a result of an insurance claim.	Na	40	B
	Dense blackberry around the base of the tree making a full structural survey of the base of the tree not possible										
T2	*Sycamore* *Acer pseudoplatanus*	12	30	N 1.5 S 2.5 E 3.5 W 3.0	4 First main limb at 4m on the east and south side	Em	Fair	Fair Reduced regularly in the past to contain the crown spread. This is as a result of an insurance claim.	Na	40	C
	Dense blackberry around the base of the tree making a full structural survey of the base of the tree not possible										
T3	*Sycamore* *Acer pseudoplatanus*	12	25	N 1.75 S 3.0 E 2.0 W 2.0	3.6 First main limb at 3.6m on the north side	Em	Fair	Fair Reduced regularly in the past to contain the crown spread. This is as a result of an insurance claim.	Na	40	C
	Dense blackberry around the base of the tree making a full structural survey of the base of the tree not possible										

No.	Species English & Latin	Approx Height (M)	Dia. @1.5 (CM)	Spread (M)	Height Crown Clearance (m)	Age Class	Physiological condition	Structural condition	Preliminary management recommendation	Years remaining	Category grading
T4	*Normandy spruce* *Picea abies*	6	12	N 1.25 S 1.25 E 1.25 W 1.25	0.5 First main limb at 1.6m	Y	Fair	Fair	Na		C / U
	Limited value to the wider landscape										

Fig 3 – Trees 1-4 right to left

7.0 Arboricultural Impact Assessment

7.1 The arboricultural impact is based on the following parameters.

- All trees that are to be retained will be protected by tree protection fencing in line with BS5837:2012 section 6.2.
- Should be read in conjunction with Tree Constraints and Protection Plan drawing number AA/161W/01.

7.2 The root protection area (RPA) is an area of ground around the tree that should be retained, undisturbed, for the benefit of the tree roots. The RPA is calculated, as set out in BS5837:2012. This determines the square metres of ground area that should be retained. This is often shown as a circle, with a radius as determined by the calculation. However, it is not always essential that this is a circle, and, in some situations, the geography of the site can make an alternative shape more appropriate. It must still equate to the same area as the circle calculated under the approved calculation.

Tree no.		RPA m/sq	Radi of RPA (M)	Tree implications assessment	Mitigation
T1	Sycamore Acer pseudoplatanus	64	4.50	Distant enough from the proposals not to be affected.	Protect the trees with a Construction Exclusion Zone, for the duration of the build. Enclosed with tree protection fencing in line with BS5837 section 7.3 below and drawing AA/161W/01
T2	Sycamore Acer pseudoplatanus	41	3.60	Distant enough from the proposals not to be affected.	Protect the trees with a Construction Exclusion Zone, for the duration of the build. Enclosed with tree protection fencing in line with BS5837 section 7.3 below and drawing AA/161W/01
T3	Sycamore Acer pseudoplatanus	28	3.00	Distant enough from the proposals not to be affected.	Protect the trees with a Construction Exclusion Zone, for the duration of the build. Enclosed with tree protection fencing in line with BS5837 section 7.3 below and drawing AA/161W/01
T4	Normandy spruce Picea abies	7	1.50	Remove to facilitate the extension and new landscaping	A small tree with limited value in the wider landscape.

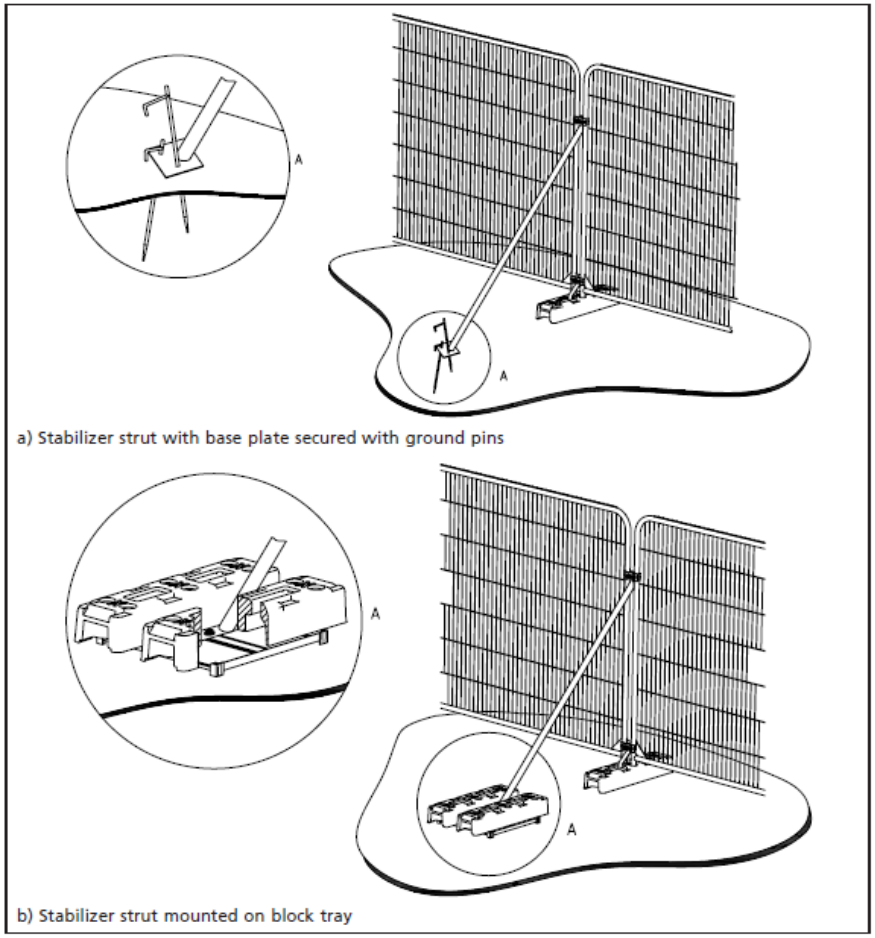
7.3 Tree protection fencing

The root protection areas (RPA) of retained trees should be protected for the duration of the works with tree protection fencing, in line with BS5837:2012, prior to the developer commencing on site. The fencing is to be of 1.8m steel mesh, heras fencing, to be installed as detailed in BS5837:2012 section 6.3.2 figure 3. (See appendix 1). Once erected, the fencing will have all weather notices attached to the barrier worded “Construction Exclusion Zone –Keep out”. The fencing should not be taken down until all construction and any hard surfaces near to the trees is completed, see appendix 1

7.4 Ground levels Ground levels within the root zone should not be changed.

Appendix 1 – Protective fencing

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

Tree protection fencing should be installed in the position as shown in the tree constraints and protection plan for the site.

Signage for the tree Protection Fencing to be placed on each run

Appendix 2 – Report Caveats

1. The report is based on a ground level visual tree assessment (Mattheck).
2. No soil samples were taken for testing. If Soil analysis is required a soil engineer should be employed.
3. No pest and disease samples were taken or sent away for analysis.
4. It remains the responsibility of the tree owner to check TPO status prior to carrying out any works on the tree.
5. Physiological and structural assessments are valid for a period of 12 months. It is an external inspection only.
6. VTA of the tree was assessed only on date of inspection; it remains valid only if no environmental changes around the tree. If any changes should occur re-inspection should be carried out.
7. Environmental changes around the tree will render the report invalid.
8. No internal diagnostic equipment was used.
9. Any works to the trees should comply with BS3998:2010 Tree Work

Appendix 3 – References

BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.

NHBC Chapter 4.2 Building near trees

D Lonsdale 'Principles of Tree Hazard Assessment and Management'
Forestry Commission 2007

Strouts and Winter 'Diagnosis of ill health in trees'
Forestry Commission 2007

C Mattheck and H Breloer 'Body Language of Trees'