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ARBORICULTURAL REPORT

106 Bexley Road
Erith
DA8 3SP

Produced for: Mr Kang, UPNA Ltd.

Prepared by: Mr Saul Heath FdScArb TechArborA

Date: 11-06-21

Arborsense Ref: Bexley Road

Arboricultural Report

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1. Introductory Details

1.1. Arborsense Arboricultural Consultants have been instructed by Mr. Kang to undertake a tree survey at 106 Bexley Road and to provide an arboricultural report.

1.2. The tree survey was undertaken to provide Mr. Kang with advice relating to his concerns over tree safety and tree protection during development on the site.

2. Scope and Limitations of the Report

2.1. This report includes:

- Identification and assessment of any direct or indirect impact on existing trees which may occur as a result of the development, and details measures which should be taken to mitigate these impacts.
- Assessment of the health, condition and safety of the trees.
- Recommendations on any immediate and future management of the trees based on current best practice guidelines.

2.2. Trees are living organisms whose health and condition can change rapidly and all trees, even healthy ones, are at risk from unpredictable climatic and man-made events. The assessment of risk for any tree is based upon factors evident at the time of the inspection and the interpretation of those factors by a suitably qualified inspector. The health, condition and safety of trees should be checked on a basis commensurate with the level of risk and preferably on an annual basis.

2.3. The assessment of the trees, conclusions and any recommendations made in this report are valid for a period of 12 months only. This period of validity may be reduced should there be any change in factors affecting both the surrounding environment and built structures within close proximity. In addition, any conclusions were made based on information available at the time of the inspection and any inaccuracies in this information may affect the validity of this report

2.4. The trees were inspected from ground level, further assessment of the trees through climbing or internal investigation was not deemed necessary.

2.5. This is not a detailed dimensional report and the measurements given are approximate.

2.6. No responsibility is assumed by Arborsense for legal matters that may arise from this report and the consultant shall not be required to give testimony or to attend court unless subsequent contractual arrangements are made.

2.7. Any alteration or deletion from this report will invalidate it as a whole.

3. Survey Method

3.1. Each tree or tree group was given a unique identity number. A visual tree assessment was then made and the following data recorded in accordance with BS5837:2012, *Trees In Relation To Design, Demolition and Construction Recommendations*.

- Tree position
- Individual number
- Height
- Stem diameter at 1.5m (DBH)
- Branch spread at 4 cardinal points
- Height above ground level of canopy, first significant branch (fsb) and direction of fsb.
- Age class
- Observations
- Structural condition
- Preliminary management recommendations
- Estimated remaining contribution (years)
- Category grading

4. Observations & Recommendations *(to be read in conjunction with the Tree Protection Plan)*

4.1. T2 is growing adjacent to the westerly boundary wall and should be removed to prevent it from causing direct damage to the wall.

4.2. T3 has visible deadwood in its canopy which should be removed to reduce the risk of it causing direct damage to people or property, other than that the tree appears healthy; T3 is protected by a Preservation Order.

4.3. T4 is leaning heavily to the north and should be removed to reduce the risk of it falling onto the driveway.

4.4. T5 has visible deadwood and decay on its main stem and in the canopy; the tree should be removed to reduce the risk of it causing direct damage to people or property.

4.5. Ivy growth is abundant on the trees on site and in neighbouring property, the ivy should be severed at the base of the tree stems to aid future inspections.

5. Description of the Proposed Development

5.1. Alterations and extensions to existing building to provide 16 apartments with associated parking and amenity space.

6. Arboricultural Implications of the Proposed Development

6.1. T2, T4 and T5 to be removed irrespective of the proposed development, T1, T3, T6, T7, T8, T9, G1 and G2 to be retained.

6.2. My assessment of the impacts on trees concludes that no category ‘A’ or ‘B’ mature trees of high landscape or biodiversity value are to be removed. None of the main arboricultural features of the site are to be removed. There will be no alteration to the main arboricultural features of the site and the proposed scheme would not have a significant adverse impact on the arboricultural character and appearance of the local landscape.

6.3. It is intended that a satisfactory juxtaposition will be achieved between the development and the existing trees by following the tree protection guidelines set out in BS: 5837, 2012 as detailed in the following method statement.

7. Future tree management

7.1. A monitoring and maintenance regime will be implemented to ensure that the retained trees remain in good health and that any future problems can be detected and remedial actions taken.

8. Arboricultural Method Statement

Introduction:

8.1. This method statement has been prepared by Arborsense on behalf of Mr Kang. It has been prepared to ensure that the trees on site and in neighbouring property are properly protected throughout the development and continue to represent a visual amenity in the future; it instructs all contractors on methods to avoid damage to the trees. It should be included as part of the specification and schedule of works issued to the contractors, and can form part of the contract. It should be available on site for inspection by local authority officers, contractors and other relevant persons.

8.2. The method statement recommends all development within influencing distance of the trees is carried out in accordance with BS5837:2012 *Trees In Relation To Design, Demolition and Construction Recommendations*.

8.3. The developer will agree to undertake tree protection to the standard advised in this method statement. Every contractor on site must receive a copy of the statement and abide by its contents.

8.4. The developer should enforce the methods of protection identified within the statement. All sub-contractors must also agree to them.

Specification for protection of the existing trees:

8.5. Fencing will be installed to protect the rpa's of T3, T6, T7, T8, T9, G1 & G2 before any works commence (shown as protective fencing on the Tree Protection Plan) the fencing will be constructed in accordance with BS 5837: 2012 (*Appendix 1.*) The area enclosed by the fencing is referred to as the Construction Exclusion Zone (CEZ). This area will be considered a complete exclusion zone; there will be no vehicles, equipment or machinery within the fenced off areas. Under no circumstances will any materials be stored within the fenced off areas, and no cement, diesel or oil stored near to them.

8.6. A Geo-textile three dimensional confinement system (*Appendix 2.*) will be laid to protect the rpa's of T3 and G1 before any works commence (shown as Ground Protection on the Tree Protection Plan). The system will minimize the potential for soil compaction. The confinement system should be filled with no-fines gravel, washed aggregate or cobbles. Materials with a high-fines content should not be used due to their almost impermeable texture when consolidated.

8.7. Any roots that are found which are smaller than 25mm in diameter during the excavations shall be pruned back to a side shoot or suitable position with a sharp pruning tool such as bypass secateurs. Roots larger than 25mm diameter should only be severed following consultation with the arboriculturist. Roots can become desiccated quickly and should be covered with dry, clean hessian sacking to prevent freezing overnight or a wet cloth on warm days.

8.8. No fires shall be lit within the spread of branches or downwind of the trees and other vegetation.

8.9. Ground levels within the fenced off areas shall not be raised or lowered in relation to the existing ground level.

8.10. No trenches for underground services shall be commenced within the root protection areas of trees which are identified as being retained in the approved plans without the prior written consent of the local planning authority. Such trenching as might be approved shall be carried out to National Joint Utilities Group recommendations.

8.11. No retained tree or shrub shall be cut down, uprooted or destroyed, nor shall any retained tree be pruned in any manner, be it branches, stems or roots, other than in accordance with the approved plans and particulars, without the prior written approval of the local planning authority. All tree works shall be carried out in accordance with BS 3998:2010 (or as may be subsequently amended). If any retained tree or shrub is cut down, uprooted, destroyed or dies, another tree shall be planted at the same place and that tree shall be of such size and species, and shall be planted at such time, as may be specified in writing by the local planning authority.

8.12. Full liaison between all parties, comprising the architect, contractor, sub-contractors, the arboriculturist and the local authority will be undertaken at all stages of the work.

8.13. These measures shall be retained as such for the duration of the demolition and construction period.

9. Data schedules explanatory notes

9.1. Survey Data Schedules:

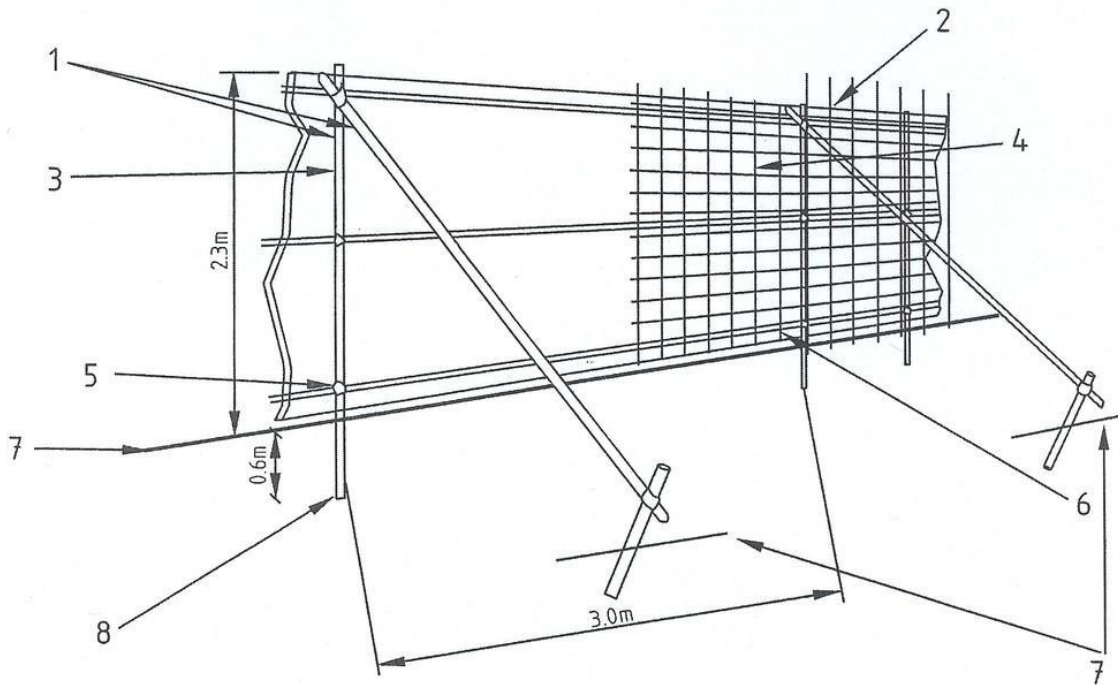
- Tree ID: Identification number for each tree on the plan.
- Species: Common name for each tree
- Y-Young: Newly established tree with DBH of 15cm or less.
- SM-Semi-mature: Well established tree, but one which has significant growth before reaching its full height or spread.
- M-Mature: A tree which has reached its maximum size.
- OM-Over-mature: A tree which is past reaching its maximum size and is 'growing down'.
- Veteran: A tree which has attained an age which is exceptional for that specific species.
- Dead: Self explanatory
- MS/multi-stemmed at 150cm.
- DBH: The stem diameter in millimetres at a height of 150cm from the base of the stem.
- Height: Height of the tree measured in metres.
- Grade: The category grading applied to each tree or group of trees in accordance with BS 5837. A: trees of high quality. B: trees of moderate quality. C: trees of low quality. U: trees unsuitable for retention.
- Sub grade: The criterion which was used to assess trees in terms of either arboricultural (1), landscape (2), or conservation value (3).
- Structural condition: The structural integrity of the tree; taking into account features like hollows, included bark etc.
- Branch Spread: N/S/E/W: The crown spread measured in metres separately in the 4 directions.

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- Height above ground level of canopy, first significant branch and direction of first significant branch.
- Estimated remaining contribution in years: Estimated prospective life expectancy of the tree recorded in 4 categories: -10, 10+, 20+ and 40+.
- Observations: Any comments regarding previous work done on the trees; Structural problems; Disease; Deadwood etc.
- Preliminary Management Recommendations: Any recommended work or further investigations which are needed to rectify any of the faults identified in the survey.
- RPA radius: The radius of the root protection area in millimetres.

APPENDIX 1.

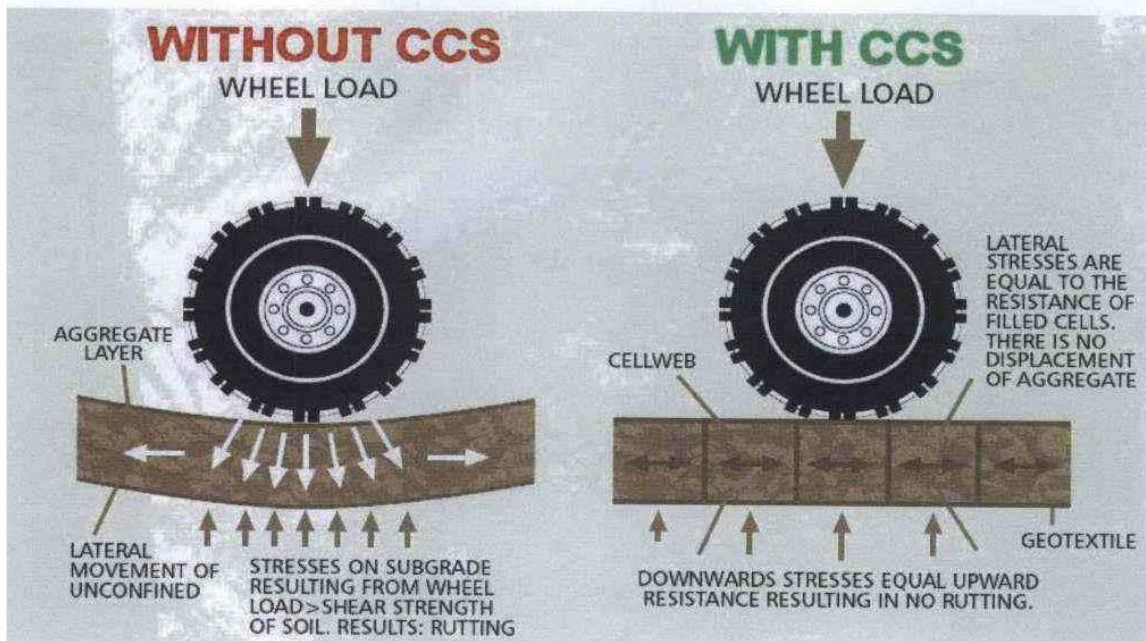


- 1 Standard scaffold poles
- 2 Uprights to be driven into the ground
- 3 Panels secured to uprights with wire ties and, where necessary, standard scaffold clamps
- 4 Weldmesh wired to the uprights and horizontals

- 5 Standard clamps
- 6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
- 7 Ground level
- 8 Approx. 0.6m driven into the ground

Example Protective Barrier: BS5837:2012

APPENDIX 2.



Example Geo-textile three dimensional confinement system.

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APPENDIX 3: TREE SURVEY DATA SCHEDULES

Tree No.	Species	Height m	Stem Diameter mm	Branch Spread m	Height Above Ground Level m	Age Class	Observations	Structural condition	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Category Grading U,A,B,C 1,2,3
T1	Sycamore <i>Acer pseudoplatanus</i>	14	450	N 3 E 3 S 3 W 3	Canopy 3 Fsb 3 Direction E	Mature	Ivy growing up the main stem	Fair	Sever the ivy to aid future inspections	20+	B2
T2	Sycamore <i>Acer pseudoplatanus</i>	4	200	N 1 E 1 S 2 W 2	Canopy 2 Fsb 2 Direction W	Mature	Ivy growing up the main stem, growing against the boundary wall.	Poor	Remove to prevent direct damage to the wall	-10	U
T3	Oak <i>Quercus robur</i>	17	880	N 6 E 6 S 6 W 7	Canopy 3 Fsb 3 Direction E	Mature	Deadwood in the canopy and Ivy growing up the main stem	Fair	Remove deadwood and sever the ivy	20+	B2
T4	Box <i>Buxus sempervirens</i>	6	200	N 3 E 2 S 2 W 2	Canopy 2 Fsb 2 Direction N	Mature	Leaning heavily to the north	Poor	Remove	-10	U
G1	Sycamore and Cherry <i>Prunus ssp.</i>	10 to 16	100 to 300	N 3 E 3 S 3 W 3	Canopy 2 Fsb 2 Direction NESW	Young to mature	Located in neighbouring property	Fair to good	None	20+	B2

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Tree No.	Species	Height m	Stem Diameter mm	Branch Spread m	Height Above Ground Level m	Age Class	Observations	Structural condition	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Category Grading U,A,B,C 1,2,3
T5	Sweet Chestnut <i>Castanea sativa</i>	12	900	N 2 E 2 S 3 W 3	Canopy Fsb 4 Direction S	Mature	Deadwood and decay visible in the crown and main stem	Poor	Remove the tree	-10	U
T6	Oak <i>Quercus robur</i>	18	500	N 6 E 2 S 5 W 5	Canopy 4 Fsb 4 Direction S	Mature	Previous management is evident, The crowns easterly side is suppressed by T7	Fair	None	20+	B2
T7	Sycamore <i>Acer pseudoplatanus</i>	18	400	N 4 E 2 S 3 W 2	Canopy 6 Fsb 4 Direction W	Mature	Ivy growing up the main stem	Fair	Sever the ivy to aid future inspections	20+	B2
T8	Sycamore <i>Acer pseudoplatanus</i>	18	500	N 4 E 3 S 2 W 2	Canopy 6 Fsb 6 Direction N	Mature	Ivy growing up the main stem	Fair	Sever the ivy to aid future inspections	20+	B2
T9	Tree of Heaven <i>Ailanthus altissima</i>	19	400	N 4 E 4 S 4 W 3	Canopy 6 Fsb 5 Direction S	Mature	Ivy growing up the main stem	Good	Sever the ivy to aid future inspections	20+	B2

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Tree No.	Species	Height m	Stem Diameter mm	Branch Spread m	Height Above Ground Level m	Age Class	Observations	Structural condition	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Category Grading U,A,B,C 1,2,3
G2	Sycamore, Oak, Tree of Heaven & Holly	2 to 18	100 to 400	N 3 E 3 S 3 W 3	Canopy 2 Fsb 2 Direction NESW	Young to Mature	Mixed species woodland located in neighbouring property to the north (protected by a woodland preservation order)	Fair to good	None	20+	B2