



# Arboricultural Report

CAVAT Assessment for GLA/0534/S2

41-67 High Street  
Yiewsley  
West Drayton  
UB7 7QQ

**January 2025**

**180315-PD-29**

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## 1 INTRODUCTION

### Instruction

1.1 This *Arboricultural Report* (the 'Report') has been instructed by *Harbourside Investments Ltd* (the 'Client').

### Definitions

1.2 The following particular terms and abbreviations may be used within this Report. These terms are defined by BS5837<sup>1</sup> as follows, unless provided without quotation marks:

- **Capital Asset Value for Amenity Trees ('CAVAT')** - CAVAT provides a basis for managing trees in the UK as public assets rather than liabilities. It is designed not only to be a strategic tool and aid to decision-making in relation to the tree stock as a whole, but also to be applicable to individual cases, where the value of a single tree needs to be expressed in monetary terms.
- **Local Planning Authority ('LPA')** - the planning department of the borough, district, or metropolitan council (in this case *The London Borough of Hillingdon*).

### Scope

1.3 This Report has been prepared to respond to the comments raised by the *Greater London Authority* ('the GLA') for case *GLA/0534/S2* ('the Case') in the *Green Infrastructure Stage 2* consultation document ('the Response') dated the 16th of December 2024. This Report outlines the CAVAT values of the trees specified for removal and the CAVAT value of those specified to be planted in accordance with *Version 1.1* from April 2024, and provides a comparison between the two figures with an associated discussion.

1.4 Specifically, this Report has been prepared in response to *Line 30* of the Response, which states as follows: "*The applicant has submitted a General Amendments Mark-up, outlining changes to the previously submitted General Arrangement (GA) drawing from Stage 1. However, the applicant does not appear to have provided the revised information for tree retention and removal, as well as the required tree valuation comparison for the updated landscape layout. The applicant should provide an assessment of the trees to be lost using the appropriate valuation system and set out how this has been accounted for through replacement tree planting within a reasonable timescale. The applicant should refer back to Stage 1 comments and provide this information as soon as possible to demonstrate compliance with Policy G7. The applicant should also clarify the number of trees proposed.*"

1.5 For clarity, the reference number for the same Case as is being administrated by the LPA is 2370/APP/2023/1727 that is described as: "*Phased demolition of the existing buildings and the redevelopment of the site for a replacement foodstore (Class E), 158 residential units (Class C3), car parking, servicing and access arrangements and associated works*" ('the Proposed Development'). Therefore, this Report must be read in conjunction with the details submitted for the Proposed Development. In particular, this Report must be read in conjunction with the following documents:

- *Arboricultural Impact Assessment (180315-PD-21b)*;
- *General Arrangement - Roof Level (06-1109-301\_P04)*; and
- *General Arrangement - Ground Level (06-1109-302\_P07)*.

## Author

1.6 This report was written by Christopher Wright. Christopher is an arboricultural consultant dealing with trees in relation to all forms of human activity including built development. He is a *Technician Member* of the *Arboricultural Association*, a member of the *Royal Forestry Society*, a member of the *Institute of Chartered Foresters*, holds the *Level 6 Diploma in Arboriculture (ABC)*, the *Professional Tree Inspection certificate (LANTRA)*, and has received a *BSc (Hons) Conservation and Environment (2:1)* from *Writtle University College*.

## 2 CAVAT CALCULATIONS

### Existing tree value

#### Proposed tree removals

2.1 The Proposed Development specifies the removal of 7no. trees - specifically, T1, T2, T3, T4, T5, T10, and T23.

#### Calculated CAVAT value

2.2 The value attributed to the existing trees that are specified for removal is £25,853. The values of these trees on an individual basis are provided in tabular format at Appendix A.

### Proposed tree value

#### Proposed tree planting

2.3 The Proposed Development specifies the planting of 28no. trees, within the public realm (i.e., at ground level) of the following species mix: *Carpinus betulus 'Frans Fontaine'* (i.e., hornbeam); *Pyrus calleryana 'Chanticleer'* (i.e., pear); and *Sorbus aucuparia 'Streetwise'* (i.e., mountain ash). An exact count for each tree species is not provided, though this Report assumes that there is an approximate equal numerical split for each species: 9no. hornbeam, 9no. pear; and 10no. mountain ash.

2.4 The Proposed Development also specifies the planting of additional trees on the roof terrace, though these trees on the roof terrace are not strictly considered in the context of CAVAT (wherein it affects 'public' trees). Consequently, this Report focusses exclusively on the 28no. trees that are specified for planting within the street scene - the remainder are considered as private assets.

2.5 The stem size values that this Report relies on for the initial values of the 28no. trees is the lower end of the range as provided within the *General Arrangement - Ground Level* plan. This document provides girths, which have been converted to diameter values through division by Pi (i.e., the specified girth divided by 3.14) - in this case, all trees at the time of planting will have a stem diameter of at least 3cm.

2.6 The extent to which this Report projects future tree value extends to 15no. years into the future, which is the lower end of the range that is typically requested by the GLA. Therefore, for planted trees within the public realm, this Report provides two values:

- Year 0 value (i.e., value at the time of transplanting); and
- Year 15 value (i.e., estimated value after 15 years of successful growing).

### **Assumed tree growth rate**

2.7 CAVAT calculations are based on a number of factors, though the starting point is stem size. Anticipating the growth rate of the stem sizes of trees is difficult and prone to significant fluctuation - particularly, in urban areas (as is the case in this instance). Consequently, there is generally understood to be a wide range as regards the rate a tree stem may grow. In some cases, trees may grow at a rate of 1cm (or greater) increase in diameter each year, though in other cases it may be as little as 0.25cm increase in diameter each year.

2.8 To further complicate matters, this rate is affected by influencing factors that may temporarily or permanently limit it. Some notable factors in this instance include:

- tree species (trees inherently grow at different rates);
- transplanting stress (trees usually are subject to 'shock' after transplanting, often for up to 3no. years - larger trees usually are subject to a greater degree of 'shock');
- soil space and aftercare (trees require theoretically unlimited soil to grow within and need to be cared for once planted via irrigation, for ideally up to 3no. years); and
- morality (some trees die after transplanting, which is normal but is significantly reduced by appropriate aftercare - in particular, effective irrigation).

2.9 In the context of this Report, noting that the area is urbanised and that the trees being planted are of a common nursery size, a conservative estimation of a stem diameter increase of 0.5cm per tree per year is assumed. This is considered to buffer against the effects that any mortality rate and transplanting stress may have on an assumed greater growth rate (i.e., it's considered to be a 'sense-check'), though it does operate on the basis of the following assumptions (note: the LPA can require adherence to the following by way of attaching a suitable planning condition to the Decision Notice):

- that all trees are actively and effectively irrigated for up to 3no. years (to reduce the risk of stress and mortality); and
- that trees that die (should any die) are replaced like-for-like with a tree of the same species and of the same size at the time that the tree died.

### **Assumed life expectancy**

2.10 The 28no. trees that are specified for planting within the public realm are all of species that are considered to have the potential to live for relatively long periods of time, which includes within urban areas - especially the hornbeam and pear. This is reflected in the calculations that are provided.

- 2.11 For clarity, it is assumed that the hornbeam and pear have the capacity to live for a longer time than the mountain ash. The calculations of life expectancy for Year 15 therefore are changed (i.e., reduced), for the mountain ash, to reflect this variable.
- 2.12 For further clarity, the calculations for Year 15 have been intentionally formed using conservative estimations - this includes the aforementioned growth rate, in addition to a background rate of quality decline. The purpose of this is to operate on a likely worst-case scenario basis when in reality it is likely that the Proposed Development will attain a more favourable CAVAT outcome.

#### **Calculated CAVAT value**

- 2.13 The value attributed to the 28no. trees that are specified for planting within the public realm are provided below (these values are provided in tabular format at Appendix B):
  - **Year 0:** £4,406; and
  - **Year 15:** £28,703.

#### **Change in values**

- 2.14 At the point that the Proposed Development is fully implemented (including tree removals and tree planting), the change in the CAVAT values of trees at ground level decreases by £21,447 (i.e., there is a loss).
- 2.15 After a period of 15no. years of conservatively-estimated tree growth and background changes to their conditions, it is estimated that this value will increase to provide a gain in CAVAT terms of £2,850. In reality, the gain in CAVAT terms is likely to be greater than this, though it is considered that it is very unlikely that there will be any loss after a period of 15no. years.

### 3 CONCLUSION

- 3.1 Based on the calculations presented within this Report, the Proposed Development will provide a minimum gain of £2,850 in CAVAT terms after a period of 15no. years.
- 3.2 In terms of the relevant comments provided by the GLA in their Response, this Report considers that there are no remaining outstanding matters with regard to trees in the context of *Policy G7*.

## 4 APPENDICES CONTENTS

### APPENDIX A - Cavat (existing trees)

- CAVAT (existing trees)

### APPENDIX B - CAVAT (new trees)

- CAVAT (new trees Y0)
- CAVAT (new trees Y15)

# **APPENDIX A - Cavat (existing trees)**

- CAVAT (existing trees)

CAVAT Full Method Project Sheet

## Spreadsheet to calculate the asset value of tree stock using the Full method

## NOTES

Enter data and comments in grey boxes.

Project: 41-67 High Street, Yiewsley (2370/APP/2023/1727 & GLA/0534/S2) - Existing

CTI Factor (Please select):

Data in white boxes are calculated automatically.

# **APPENDIX B - CAVAT (new trees)**

- CAVAT (new trees Y0)
- CAVAT (new trees Y15)



CAVAT Full Method Project Sheet

Spreadsheet to calculate the asset value of tree stock using the Full method

## NOTES

Enter data and comments in grey boxes

Project: 41-67 High Street, Yiewsley (2370/APP/2023/1727 & GLA/0534/S2) - Year 15

CTI Factor (Please select):  125%

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