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ARBORICULTURAL AND WOODLAND CONSULTANTS

TITLE: **Arboricultural Impact
Assessment:**
2 Tower Court, London

DATE: 13th February 2020

PREPARED BY: Dominic Poston

REF: HWA10230.01_APIII



ARBORICULTURAL IMPACT ASSESSMENT

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DATE: February 2020

Prepared For
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Summary

It is the author's opinion that there is no specific arboricultural reason why this development cannot proceed as highlighted within this report.

The site has been assessed in accordance with BS 5837:2012 'Trees In relation to design, demolition and construction – Recommendations'.

The proposal is for the re-modelling of 2 Tower Court, including a deepening of the existing basement to create new residential accommodation.

The proposal will not require the removal or pruning of any existing arboricultural features. The building will be within close proximity, but outside of canopy spreads of retained trees.

The proposed building makes good use of the space available allowing the good quality trees to be retained with ample space.

A detailed impact assessment can be found in Part 2; this should be read in conjunction with the Tree Protection Plan which can be found at Appendix B. Site specific methodologies are located in Part 3.

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Part One: Introduction

1 Particulars of Instruction

- 1.1 Hallwood Associates Ltd (HWA) are instructed by The British Retail Consortium to provide specialist arboricultural advice in accordance with the principles laid out within British Standard *BS 5837: 2012 "Trees in relation to design, demolition and construction – Recommendations* (BS) with regards to a planning application being made and to report on the following:
1. To assess the quality of the Trees and Hedgerows on (and immediately adjacent to) the site.
 2. To provide an assessment of the impact the proposed development will have upon the existing significant arboricultural features.
 3. To recommend measures that will suitably protect retained trees during the development process.
 4. To recommend an appropriate level of mitigation and/or compensation where necessary.

2 Authorship

- 2.1 The author is a chartered arboriculturist and chartered environmentalist. He holds the Royal Forestry Society's Professional Diploma in Arboriculture, is a fellow member of the Arboricultural Association and a registered consultant with the Institute of Chartered Foresters. The findings in this report are reached through site observations and conclusions are made in light of the author's experience. Details are available upon request or at www.hallwoodassociates.com.

3 Provided Documents

- 3.1 The author was provided with copies of the following plan(s):
- I. Topographical land survey of existing site
 - II. Proposed layout

4 Scope of Survey

- 4.1 This report and all plans appended to it have been formulated using guidance given in the British Standard 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 4.2 The tree survey was carried out independently, as far as possible, of the proposed new layout, as recommended in the British Standard.
- 4.3 The survey contains details of the size, condition and retention category of each tree which may be affected by the proposed development.
- 4.4 The retention category is derived from the British Standard which allows arboriculturists to place trees in certain bands so that impacts can be appropriately quantified and managed; broadly defined as follows:
- A Category - High quality and value - such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested);
 - B Category - Moderate quality and value - those in such a condition as to make a significant contribution (a minimum of 20 years is suggested);
 - C Category - low quality and value – currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested).
 - U Category - in such a condition that any existing value would be lost within 10 years and which should, in the current context be removed for reasons of sound Arboricultural management.
- 4.5 Tree positions have been taken from, or estimated from the provided (topographical) plans. It would be prudent to confirm positions if it could affect the proposed construction.

5 Limitations

- 5.1 The potential effect of development on trees, whether statutorily protected (e.g. by tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. HWA have not checked whether trees on site are statutorily protected and you **must** carry out a statutory tree protection check if you intend to undertake any works prior to formal planning consent being issued.
- 5.2 Comments relating to non arboricultural matters may be made throughout this report. Making comments on such matters is within the normal remit of our instructions and the range of the

author's experience. Any opinion thus expressed should be deemed as provisional and confirmation sought from an appropriately qualified professional.

- 5.3 The statements made in this report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Hallwood Associates Limited cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the report are carried out to, or affecting, the subject tree(s), whichever is the sooner.
- 5.4 All rights in this report are reserved. Its content and format are for the exclusive use of the addressee in dealing with this site. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of Hallwood Associates Limited.
- 5.5 European legislation and UK statutes such as the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010 (as amended) provide statutory protection to birds, bats and other species that inhabit trees. These could impose significant constraints on the use and timing of site access in addition to any of the tree matters detailed in this report. These issues are beyond the scope of this report and have therefore not been considered.

6 Methodology

- 6.1 Each tree was surveyed and given a number corresponding to the provided plan(s) found at appendix C. For each group or individual information was collected as recommended at 4.4.2.5 of BS 5837. The survey was preliminary in nature and did not involve aerial or detailed inspection. This data is held within the tree schedule which can be found at Appendix A.
- 6.2 BS5837 recommends that trees within categories A-C (where A is highest quality) are a material consideration in the development process. However it should be noted that young trees with a stem diameter less than 150mm may be considered for relocation. Category U trees are those that will not be expected to exist for long enough to justify their consideration in the planning process. The A-C categories are combined with the numbers 1, 2 or 3. These numbers signify whether the justification for the category was based on arboricultural, landscape or cultural/conservation values respectively. The tree categories are illustrated on the plans with colour coding. Category A trees are light green, category B are mid blue, category C are grey and category U are dark red.

- 6.3 Where category U trees are notable for their conservation, heritage or landscape value, even though only for the short term, they may be upgraded, although they might be suitable for retention only where issues concerning their safety can be appropriately managed.
- 6.4 Section 4.6 of BS5837 recommends that the trunk diameter measurement for each tree is used to calculate the root protection area (RPA), which can then be interpreted to identify the design constraints and, once a layout has been developed, the Construction Exclusion Zone (CEZ) to be protected by barriers (tree protection plan (TPP)).
- 6.5 Following inspection and grading of the trees, the information listed in Appendix A is used to provide constraints guidance to the project architect based on the locations of the best trees. All U trees are ignored as they not of good enough quality to be considered as a material constraint on development.
- 6.6 The enclosed tree protection plan (TPP) shows the trees recommended for retention, their relevant RPA and provisional positions for protective fencing and ground protection. The position of the protective fencing is adjusted by estimating the likely root morphology. Root morphology will be influenced by the ground conditions; roots will proliferate where soil conditions are favourable and less so where the ground conditions are poor e.g. Buildings and metalled roads with deep foundations will inhibit root growth into the area.

7 The Site

- 7.1 The site, located at Ordnance Survey Grid Reference TQ 30021 81041 was visited by Dominic Poston on 06 November 2018 and comprises an ancillary building to the larger 22 Tower Street which is adjacent
- 7.2 The tree stock on Site is limited to two moderate to low value planted specimen trees within a raised planter within the grounds of 22 Tower Street and along the eastern boundary with Tower Court.

Part Two: Impact Assessment

8 Arboricultural features

- 8.1 There are 2 (two) trees and 1 (one) group of woody vegetation which have been categorised adjacent to the site. Both trees are categorised B, whilst the group is categorised C.
- 8.2 A schedule of tree condition and category of retention (see 4.4 above) is attached at appendix A.

9 Detailed Impact Assessment

- 9.1 All surveyed vegetation is immature, and if causing a constraint on development could be adequately mitigated for through the specification and planting of semi-mature nursery stock in the landscape phase.
- 9.2 The proposed developments impact upon the trees has been assessed according to RPA encroachment and disturbance. All trees affected and the proposed mitigation is identified in Table 1 below:

Important Trees		Non-Important Trees	Impact	Reason	Mitigation
A	B	C			
-	-	-	Trees to be removed	Building construction and/or proximity	Not applicable
-	-	-	Trees to be pruned	To make space for development	Not applicable
-	-	-	RPA disturbance	Removal or installation of surfaces/ structures/ landscaping	Not applicable

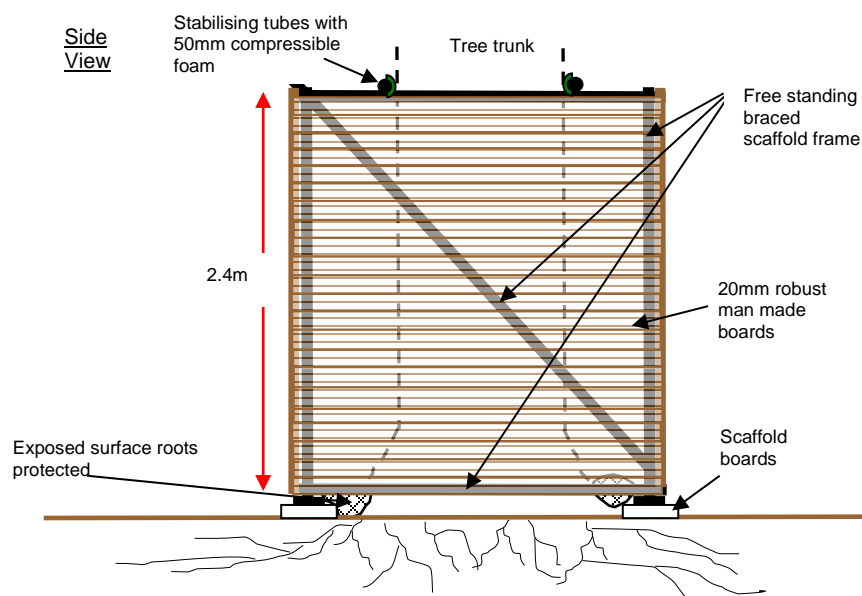
Table 1: Arboricultural Implications

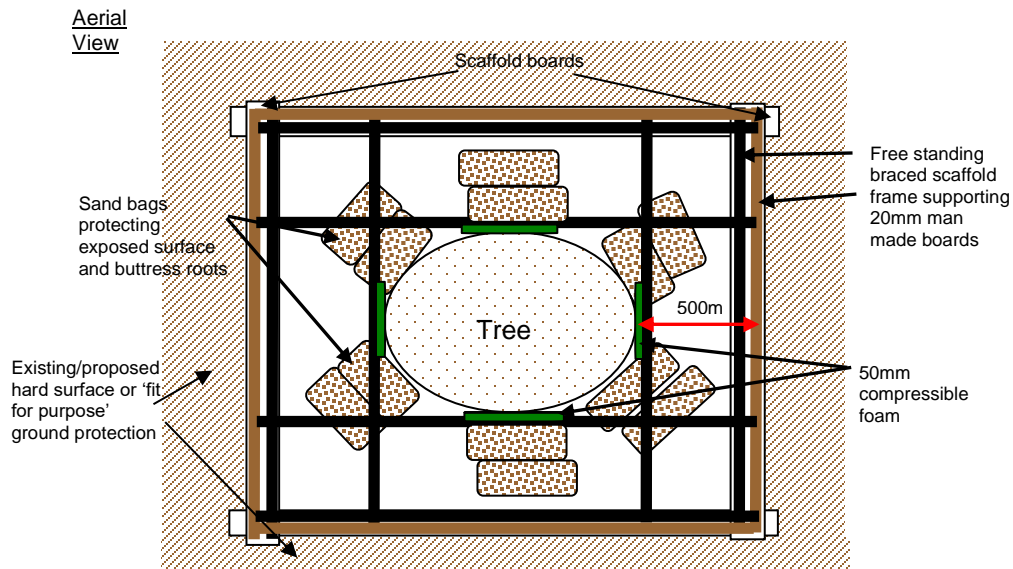
- 9.3 Given the works approved at 22 Tower Street, there is no additional negative arboricultural impact resulting from proposals at 2 Tower Court. However, given that both sites are under the same ownership and construction works related to the basement excavation at 2 Tower Court are likely to encroach into the 22 Tower Street courtyard, it is intended to retain physical tree protection as detailed on the enclosed Tree Protection Plan (ref: HWA10230.01_TPP).

10 Protection of retained trees

- 10.1 The successful retention of trees depends on the quality of protective measures and the administrative procedures to ensure those protective measures remain in place throughout development.
- 10.2 **Individual Trunk Protection** is required for trees 1 and 2 due to site access/existing hard surfaces/the need to maintain public access preventing the utilisation of standard barriers. Due to the trees' position close to areas of high construction activity, these trees will be protected using heavy-duty individual trunk protection to a height of not less than 1.5 metres. This will consist of a well-braced self-supporting scaffold frame to a height of 1 metres, clad with 20mm thick robust man-made boards. Buttress roots will be protected with two layers of sand bags and horizontal bars covered with a compressible foam to prevent damage to trunk bark (See Figure 1 below).

Figure 1: Heavy Duty Individual Trunk Protection





Once the barriers are in place they must remain *in-situ* throughout the following list:

- Contractor occupancy
- Plant and Materials delivery
- Construction works
- Installation of porous surfacing
- Utility installation
- Completion of development
- Landscaping

The area within the CEZ will be regarded as **sacrosanct**, and the tree protective barriers shall not be taken down or relocated at any time without the written approval of the LPA.

11 Mitigation

- 11.1 In this instance it was not deemed necessary or appropriate to specify new tree planting in mitigation.

12 Tree works schedule

- 12.1 No tree works are required to specifically implement the proposals at 2 Tower Court.

13 Conclusions

- 13.1 British Standard BS5837:2012 contains clear and current recommendations for a best practice approach to the assessment, retention and protection of trees on development sites. The proposed development has followed this guidance by:
- Seeking arboricultural advice to inform the layout and design of the proposed building
 - Respecting the constraints posed to development of the site by high or moderate quality trees
 - Continuing to take advice on all aspects to the proposal that may impact upon trees
- 13.2 The protection of retained trees on site during the proposed development works can be achieved by continuing to follow the recommendations of this report and BS: 5837.
- 13.3 The retained trees will not give rise to any substantial post development pressure.

Appendices

APPENDIX A – Tree Survey Schedule

APPENDIX B – Plans

Appendix A

TREE SURVEY SCHEDULE

TREE SURVEY KEY

TREE SURVEY KEY								
		Age Class		Definition	Retention Category			
Stem Dia	= Stem diameter (mm) at 1.5m above ground level	Y	Young	1st 1/3rd of life expectancy	Category (BS 5837)		Sub Category (BS 5837)	
C.C.	= Height of crown clearance above ground level	SM	Early Mature	2nd 1/3rd of life expectancy	A	High Quality & Value	1	Mainly arboricultural value
U.L.E.	= Useful Life Expectancy of the tree in years	M	Mature	Final 1/3rd of life expectancy	B	Moderate quality & value	2	Mainly landscape value
Stems	No of stems emanating below 1.5m above ground level	OM	Over mature	Beyond life expectancy & in natural decline	C	Low quality & value	3	Mainly cultural value
(Ref)	Number and type of feature (T – tree, H – hedge, G – group, S - stump)	V	Veteran	Great age & poss. high conservation value	U	No quality & value - Remove		
NB:		Estimated ultimate height and crown spread achievable at maturity if conditions are ideal are given (in brackets) next to actual measured dimensions						

TREE SURVEY SCHEDULE (TABLE 1)

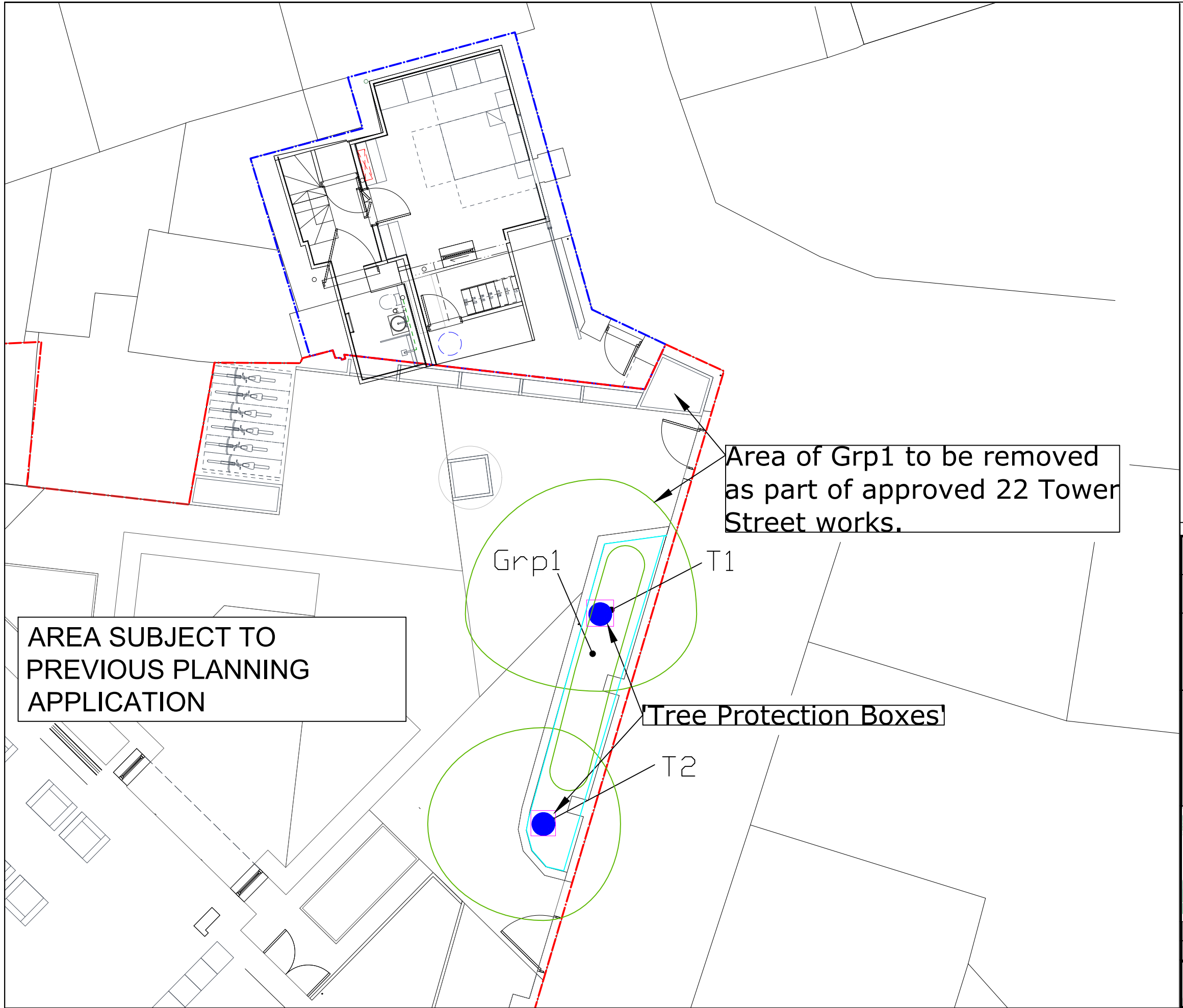
(Ref) No.	Species	Height (m)	Stem diameter (mm)	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	Canopy Height (m)	Life Stage	Observations	Recommendations	ULE (yrs)	Retention category
T1	Whitebeam	10	210	3.5	2.5	2	3.5	3	SM	Growing in raised bed. Previous minor pruning evident. Included, compression union of main stems at 2.5m.	None	20+	B2
T2	Whitebeam	10	220	2.5	2	2.5	3	3	SM	Growing in raised bed. Previous minor pruning evident. Included, compression union of main stems at 2.5m.	None	20+	B2
Grp1	Mixed	<5	<100	-	-	-	-	0	SM	Growing in raised bed. Predominantly pittosporum and laurel.	None	10+	C2

APPENDIX B

Plans

Figure 1: Tree Protection Plan

Figure 1: Tree Protection Plan



AREA SUBJECT TO
PREVIOUS PLANNING
APPLICATION

Area of Grp1 to be removed
as part of approved 22 Tower
Street works.

Tree Protection Boxes

Notes:
This drawing is to be read in conjunction with all other relevant technical information, statutory approvals, specifications and 3rd party information. Do not scale from this drawing. Use only dimensions provided. All dimensions and levels to be checked on site and all discrepancies must be reported to the drawings author immediately. This drawing was based upon drawings provided by the client. The original of this drawing was produced in colour and monochrome versions cannot be relied upon. Responsibility cannot be accepted for alteration and/or deviation from this design without the prior acknowledgement of the drawings author. Any commercial decisions relating to this information must make due allowance for dimensional and area variation resulting from the design development and construction processes as well as the requirements of statutory authorities. This drawing is to be used only for the purposes indicated. It is the responsibility of the contractor to ensure any necessary consents are in place. This drawing is copyright and the property of Hallwood Associates Ltd (HWA) and must not be reproduced without prior written agreement. Any Intellectual Property Rights (IPR) relating to the design(s) described in this drawing belong to the originating designer and, where it is not HWA's design, no credit for the design or IPR is sought by this drawings author.

LEGEND:

T1 - Extent of root protection area (RPA)
Indicative stem location and BS 5837 value categorisation

Extent of existing crown spread:
Red = Tree identified for removal to facilitate development.
Green = Tree identified for retention.

BS 5837 value categorisation colour code:
Green - High value
Blue - Moderate value
Grey - Low value
Red - No value

Indicative line of tree protection
(See accompanying report for details)

Rev.	Description.	Date.
Client: British Retail Consortium		
Job: 2 Tower Court		
Drawing Title: TREE PROTECTION PLAN 1 of 1		
Client Logo:		
 <div>HALLWOOD ASSOCIATES LTD 4 Granger Avenue Maldon Essex. CM9 6AN t: 01621 770168 m: 07946 938906 e: enquiries@hallwoodassociates.com</div>		
Date:	13.02.20	Drawn By: DAP
Scale:	1:100 @ A3	Checked By: GLP
Drawing Number: HWA10230.01_TPP		Rev. .