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ARBORICULTURAL REPORT: ARBORICULTURAL IMPACT ASSESSMENT and ARBORICULTURAL METHOD STATEMENT

In relation to a Planning Application

at:

Land at Chiswell Green Lane,
St Albans, Hertfordshire

Compiled by:

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October 2021

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1.0 Instruction

- 1.1 I have been instructed by my client – McPartland Planning Limited - to provide an appraisal of the likely impact to, and implications for trees on, or adjacent to, 'Land at Chiswell Green Lane, St Albans, Hertfordshire' in relation to a planning application on the site.
- 1.2 The application is for 'Proposed Residential Development of up to 330 affordable dwellings'.

2.0 Introduction

2.1 Qualifications and Experience

- 2.1.1 I am David Clarke, I have a Bachelor of Science Honours Degree in Landscape Management from Reading University and I am a Chartered Landscape Architect and Chartered Member of the Chartered Landscape Institute (1998). I hold the Professional Diploma in Arboriculture (RFS) (2012) and I am a Professional Member of the Arboricultural Association. I have 30 years' experience of working in both the private and public sector in relation to arboricultural and landscape issues.

2.2 Scope of this Report

- 2.2.1 This Arboricultural Impact Assessment and Arboricultural Method Statement form the Arboricultural Report for the Planning Application. They should be read in conjunction with Tree Protection Plan (TPP/LCGRSAH/010 A) and Arboricultural Survey (Appendix A). The Arboricultural Report is aimed at identifying and addressing those matters concerning trees in relation to the proposed planning application. It will clarify these issues:

- The principles and procedures to be applied to achieve a harmonious and sustainable relationship between retained trees and structures.
- The species, size, position and condition of those trees within the area of the proposed development where trees may potentially have some significance to the proposed development. The full survey schedule is set out in Appendix A.
- The impact of the proposed development upon these trees (and vice versa) including those trees to be removed due to the proposed development.
- Any measures that are required to protect retained trees during the proposed works.

- 2.2.2 The trees have been assessed (see Arboricultural Survey – Appendix A) as set out in BS BS5837: 2012 `Trees in relation to design, demolition and construction. Recommendations.’ An Arboricultural Survey was undertaken by myself in August 2021 in relation to this planning application.
- 2.2.3 Tree numbers within the text (T1-T2 and G1-G6) relate to numbers designated as part of the Arboricultural Survey unless otherwise stated. The trees are plotted on Tree Protection Plan (TPP/LCGRSAH/010 A) which accompanies the planning application.
- 2.2.4 BS 5837: 2012 `Trees in relation to design, demolition and construction. Recommendations’ provides recommendations for the assessment of trees on development sites and suggests four categories into which trees should be placed for assessment purposes. These categories have been used as part of the assessment of trees within this report.

2.3 Relevant Background Information

- 2.3.1 It is understood from my Client that there are no trees on the site which are protected by a Tree Preservation Order (TPO) and that the site is not located within a Conservation Area.
- 2.3.2 It is recommended that this information on protected trees be confirmed by anyone proposing to undertake any (future) works to trees – both inside and outside the application site. This should be undertaken in writing with the Local Planning Authority (LPA) before proceeding with any tree works unless works within this report are agreed as part of a Planning Approval.

2.4 Documents and Information Provided

- 2.4.1 All plans within this report are based upon drawings supplied by McPartland Planning Limited, Hertfordshire.
- 2.4.2 This document has been prepared in accordance with guidance set out in British Standard BS 5837: 2012 `Trees in relation to design, demolition and construction. Recommendations’ (BS 5837:2012).

3.0 Report Limitations

- 3.1 The report is for the sole use of the client and its reproduction or use by anyone else is prohibited unless written consent is given by the author.
- 3.2 The report observations are to be considered as correct at the time of inspection only. Trees are a growing, living organism, and are readily affected by many environmental factors. As such their condition and circumstances can change in a very short period of time. Therefore this report should be construed as valid for an absolute maximum of 12 months from the date of the Arboricultural Survey provided all factors remain unchanged.
- 3.3 This is an arboricultural report and as such no reliance should be given to comments relating to buildings, engineering, soils or other unrelated matters. The inspection of trees was undertaken from ground level and they were not climbed. No samples of wood, roots, soils or fungus were taken for analysis. Observations of the trees were confined to what was visible from within the site and surrounding public places. A full hazard risk assessment of the trees was not undertaken.
- 3.4 The presence of TPOs, a Conservation Area, or other designations, may affect the use of the site and the management of trees on the site. These designations can be served on the application, or adjacent, sites at any time. The landowner, or his representatives, should therefore satisfy themselves as to the presence (or absence) of these designations prior to:
- Undertaking any works to trees on, or adjacent to, the site. Where necessary written permission from the Local Authority will be required prior to undertaking tree works.
 - Undertaking any of the works specified in this Arboricultural Report before planning permission is granted.

4.0 Brief Description of the Application Site and the Proposed Development

- 4.1 The application site is an existing large grass area divided into separate fields by fencing. Part of the site was previously used for Polo and part of the site is used for paddocks. There is good screening to all boundaries which is provided by hedging and trees. There are level changes across the site. There are a limited number of structures and containers within the site.



Photograph A – Showing one of the existing paddocks within the site.



Photograph B – Looking south and west through the site.

4.2 The application is for 'Proposed Residential Development of up to 330 affordable dwellings'.

5.0 General principles for protection of trees during development

- 5.1 It is equally important to ensure the protection of trees both above and below ground. Guidance is provided in BS 5837: 2012 as to the protection of trees, before, during and after development.
- 5.2 The Arboricultural Impact Assessment will set out the potential impact of the proposals on trees and vice-versa. There is a need to protect trees and provide an Arboricultural Method Statement where proposals will impinge, or impact on the Root Protection Areas (RPAs) of retained trees. Root Protection Areas (RPAs) are a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. These are set out as Construction Exclusion Zones and have been calculated as part of the Arboricultural Survey.
- 5.3 The RPA for each tree is initially plotted as a circle centered on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area will be produced. These factors include the morphology and disposition of the roots, when known to be influenced by past or existing site conditions - such as the presence of roads and structures - and site topography. Modifications to the shape of the RPA within this report reflect a soundly based arboricultural assessment of likely root distribution. The RPA may change its shape but not reduce its area whilst still providing adequate protection for the root system.
- 5.4 Proposals may impinge on RPAs but these should be minimal and construction techniques such as specialized foundation designs should be considered to reduce the impact of development. The proposals will relate specifically to the site conditions and each individual tree and its category within the BS 5837 grading system.

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ARBORICULTURAL IMPACT ASSESSMENT

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6.0 **Arboricultural Impact Assessment (AIA)**

6.1 As stated above British Standard recommendations (BS5837: 2012) provides a formula for calculating the Root Protection Area (RPA) recommended to protect existing trees that are to be retained. The shape of the root protection area and its exact location will depend upon arboricultural considerations but the area will normally be represented on a plan as a circle. The purpose of the RPA is to prevent physical damage to tree roots and to prevent damage to the soil structure in which they live by soil compaction, changes in soil levels or prevention of gas exchange to living roots.

6.2 These RPAs are shown on the Tree Protection Plan (TPP/LCGRSAH/010 A) which also forms part of the Arboricultural Method Statement. Where incursion within the RPA of a retained tree is necessary as part of the construction process then a methodology will be in place to prevent, or reduce to an insignificant level, damage to trees.

6.3 Below I have discussed the significance of the trees and the constraints that they are likely to pose to the proposed development (and vice-versa). Together with the Arboricultural Survey the AIA sets out any tree works required in order to facilitate the development as well as identifying works to trees (including removal) that should be undertaken as part of the management of trees on the site.

6.4 **Summary of Tree Impact Assessment**

6.5 There are 2 no. individual trees and 6 no. groups of trees which form the basis for this report and which could potentially be affected by the proposal.

6.6 **Trees recommended for removal for Arboricultural Reasons**

Of the trees within this report trees none are recommended for removal irrespective of this Planning Application. However the long term management of G5 and G6 may require the thinning of trees here to benefit the long term retention and growth of the remaining trees. These trees could be retained on site as dead log piles which will be beneficial for wildlife.

6.7 **Schedule of trees recommended for removal for Arboricultural Reasons**

<u>Tree No.</u>	<u>Species</u> (Common Name)	<u>BS</u> <u>Category</u>	<u>Reason for recommended removal</u>
None			

6.8 **Trees removed due to the application**

Of the trees within this report 1 no. group of trees and trees within 2 no. groups (G1 and G6) will need to be removed, or are proposed to be removed as part of the implementation of the development.

6.9 These are low quality or unremarkable 'C' Category trees as set out in BS 5837:2012. The trees within G6 are relatively small and set back within the site and are not readily visible to the general public due to intervening vegetation. These trees will need to be removed to introduce a footpath link to the Public Right of Way to the rear of the site. The group to be removed (G2) are located to the front of the site but are not readily visible to the general public due to the contained nature of views brought about by the narrow lane and boundary vegetation. These are also non-native trees which are out of character with this part of the lane. The removal of these trees will not have a substantial impact on the visual amenity of the area or its enjoyment by the general public.



Photograph C – Showing 2 no. Cypress (G2) which will be removed to implement the proposed site access

6.10 Additionally replacement planting is proposed as part of the site development to mitigate for the removal of these trees. There are significant areas within the site where tree planting could be undertaken. The quantity and quality of trees to be planted will greatly outweigh the number of trees to be removed. Sections of both native and non-native hedging will be removed to implement access points to the site. It is recommended that replacement native trees and hedging are planted to the site boundaries. Overall the removal of these trees and hedging for the site development is not so significant that it would lead to the refusal of Planning Permission.

6.11 Schedule of trees removed due to the application

<u>Tree No.</u>	<u>Species</u> (Common Name)	<u>BS</u> <u>Category</u>	<u>Reason for removal</u>
G1	1 no. Field Maple (part of group)	C2	To introduce a car parking space.
G2	2 no. Cypress	C2	To implement new access point to the site.
G6	Several Trees	C2	To implement new footpath access to the site.

6.12 Trees potentially affected by the application

Access to the site, the demolition of existing structures and the construction of the proposed dwellings will take place outside the RPAs and canopy spreads of retained trees. However the removal and replacement of hardstanding and the introduction of new hardstanding will take place within, or adjacent to, the RPAs or canopy spreads of retained trees.

6.13 These potential impacts are set out and evaluated below and measures to prevent, or reduce, the effects of the proposals on these trees are set out in the Arboricultural Method Statement. The impact on retained trees from this development will not be significant as long as the proposals set out in this report are followed.

6.14 Schedule of trees potentially affected by the application

<u>Tree No.</u>	<u>Species</u> (Common Name)	<u>BS</u> <u>Category</u>	<u>Reason for potential impact</u>
T2	Leyland Cypress	C1	• Introduction of footpath within area of existing access within 6% of RPA of tree.

			<ul style="list-style-type: none"> • Removal of hardstanding (existing access) within RPA and formation into landscape area of the site.
G1	1 no. Field Maple	C2	<ul style="list-style-type: none"> • Installation of car parking space within less than 5% of RPA.
G4	Cypress (part of group)	C2	<ul style="list-style-type: none"> • New footpath access - within area of existing informal access - to edge of RPA.
G5	Several trees including Cherry, Field Maple Hornbeam, English Oak and Common Hawthorn	C2	<ul style="list-style-type: none"> • Potential new footpath access - within area of existing informal access - to edge of RPA.
G6	Several trees including Cherry, Common Ash, Hornbeam, English Oak and Common Hawthorn	C2	<ul style="list-style-type: none"> • Potential new footpath access to edge of RPA.

6.15 Assessment of potential impacts on retained trees

6.16 Assessment of Distribution of Roots of Trees

As set out above the RPAs have been calculated as part of the Arboricultural Survey. The shape of the RPA and its exact location will depend upon arboricultural considerations but the area will normally be represented on a plan as a circle. Pre-existing site conditions – such as building footprints, hard surfacing and changes in levels - or other factors may indicate that rooting has occurred asymmetrically.

6.17 With regard to the retained trees within this report there are potential restrictions on the root activity of trees due to:

- The surfacing associated with Chiswell Green Lane – T2, G1 and G3-G4;

- The level changes associated with the southern site boundary – G3-G4

6.18 The surfacing of Chiswell Green Lane is adjacent to T2, G1 and G3-G4. The capping of the soils by this surfacing will reduce the availability of resources (such as water) to potential root activity and reduce gaseous exchange between the soils and the atmosphere. Factors such as soil compaction during the construction of the surfacing and the physical presence of hardstanding would also significantly reduce or prevent rooting activity in these areas. The exact construction of this surface is unknown but it is assumed that a standard construction has been used.

6.19 G3-G4 are located on changes of levels down to Chiswell Green Lane. The level changes here could restrict and contain the roots from these trees. However the exact impact on root activity could not be determined as part of the Arboricultural Survey.

6.20 It is therefore considered that no root growth will have taken place beneath the surface of Chiswell Green Lane but that root growth could have taken place within the levels changes along this lane. Asymmetrical RPAs are shown where there are definite restrictions on root activity. Otherwise circular RPAs are shown.

6.21 Site Access

During the site development access will be from the proposed access from Chiswell Green Lane. This is outside the RPAs of retained trees. Therefore Ground Protection Measures are not required during the site development in order to protect trees.

6.22 Demolition

The demolition or removal of structures will take place outside the RPAs of trees. However the uncontrolled removal of these structures could lead to soil compaction in tree rooting zones or physical damage to trees which could adversely affect their long-term health and viability. To prevent unnecessary tree loss this phase of the project will be undertaken in a controlled manner as part of the phased operation of the development. This will include the use of Tree Protection Fencing. It is noted that due to the limited size of some of these structures that they will be removed concurrently with the Construction Phase. The only large structure within the site may be retained during the Construction Phase and utilised for storage or temporary site buildings and then removed at the end of the project.

6.23 Removal and Replacement of Hard Standing within RPAs

An existing access to the site will be removed within the RPA of Leyland Cypress (T2). Part of this access will be formed into the landscaped area of the site and part will be formed into a footpath access. The removal of part of the surface will have some benefits to T2 by improving its rooting environment. The introduction of the replacement surface (footpath) is assessed to have a neutral and insignificant impact on this tree. However, these works will need to be undertaken with care to ensure that these trees are not damaged. A specification for these works is set out in the Arboricultural Method Statement.

6.24 Installation of New Hard Standing within RPAs

A car parking space will be constructed within less than 5% of the asymmetrical RPA of a Field Maple within G1. New footpath access points to the northern and western boundaries will take place within the potential (asymmetrical) RPAs of G4-G5 and G6 respectively. These are considered to be minor and insignificant incursions in relation to the long-term viability of these trees. As set out in BS 5837:2012 there are soil volumes contiguous with the RPAs which the trees can exploit and which will mitigate for these incursions. Additionally trees within G5-G6 are young developing trees which will readily adapt to the incursions. However these works must be undertaken in a controlled and phased way to ensure that these trees are not damaged as part of the construction of this element of the site development. A methodology for this is set out in the Arboricultural Method Statement.

6.25 Construction within RPAs

The construction of the proposed dwellings will take place outside the RPAs of trees. Therefore the use of standard construction techniques is considered to be acceptable in this instance.

6.26 Construction Activity

Uncontrolled construction activity could lead to direct or indirect damage to trees - both above and below ground. Therefore Tree Protection Fencing is proposed within the Arboricultural Method Statement to restrict and control construction activity, contain the development footprint and protect retained trees during the works. This will include the retention of existing fencing where practical.

6.27 Movements of vehicles, machinery or pedestrians will take place outside the RPAs of retained trees during the Construction Phase. Ground Protection Measures are therefore not required for the protection of trees.

6.28 Canopy Spreads and Presence of Trees

The canopies of the trees are outside the building footprints of the dwellings. No tree works are currently proposed as part of the site development.

6.29 Shading

The retained trees within this report are located to the site boundaries. There will be a significant separation between their canopies and the proposed dwellings. The site is relatively open and good light penetration will be allowed to both the garden areas and dwellings. This will mean that trees will not be dominant to the development and will not have a detrimental impact on the site or its users. There will therefore be no future pressure to prune or fell trees through shading issues.

6.30 Levels

No ground level changes are currently proposed or should take place within the RPAs of retained trees except any discussed and assessed within this report.

6.31 Herbicides and Pesticides

The use of herbicides and pesticides is not proposed within the RPAs of retained trees as part of this application. Should this change then chemicals will be specified which will not have an impact on retained trees.

6.32 Utility Routes

The exact location of services is not known at this stage. However it is assumed that service runs can enter through the proposed site access and/or be located outside the RPAs of trees. However if required specialised techniques – such as those set out in '*NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees*' 2007 National Joint Utilities Group (NJUG) Volume No. 4: No. 1 – will be used. The situation regarding utility routes will need to be confirmed as part of conditions for a Planning Approval.

6.33 Temporary Site Buildings and Storage of Materials and Plant

Poor placement of temporary site buildings (including latrines), contractors parking, materials and plant can lead to direct damage to retained trees or indirect damage such as through the compaction of soils. The layout and operation of the site has therefore been

considered and planned at this early stage to reduce or prevent any potential and significant damage to retained trees. This includes the erection of Tree Protective Fencing as set out above and in the Arboricultural Method Statement.

6.34 Erection of Boundary Treatments

No new boundary treatments (fences) are currently proposed within the RPAs of trees.

6.36 End Use of the Proposal

The proposals will have a residential use at the end of the project.

7.0 Recommendations

- 7.1 All tree works – removal and pruning – should be undertaken prior to the start of the site development so as to avoid any conflict between trees and contractors during the implementation of the project. Remove all other vegetation not to be retained as part of the site development.
- 7.2 Existing trees can be easily damaged directly through root severance and, inadvertently, through soil compaction which disrupts the soil structure causing asphyxiation of roots and subsequent root dysfunction. Spillage of toxic materials can also cause root death. Protection for trees is essential to ensure they are not affected by the development.
- 7.3 Specifications for the protection of trees are proposed in the Arboricultural Method Statement. These include the use of Tree Protection Fencing and should be implemented to prevent, or limit, any significant damage to the roots of trees. Protective fencing should be erected as shown on the Tree Protection Plans.
- 7.4 The phasing of the operations should follow that set out in the Arboricultural Method Statement to ensure that the protection of trees is prioritised.
- 7.5 The location and siting of all utilities should be outside of the RPAs of retained trees as enforced on site. If incursions within RPAs are unavoidable then specialised installation techniques will need to be agreed with an Arboriculturist before proceeding.
- 7.6 An Arboriculturist should be the main contact with the Local Authority Tree Officer and notify them of the proposed schedule prior to work commencing on site. Where necessary Arboricultural Supervision of the site should be undertaken on a schedule to be agreed with the site owner.

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ARBORICULTURAL METHOD STATEMENT

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8.0 General

8.1 This document sets out the methodologies for proposed works that affect trees on, and adjacent to, the site. These follow the granting of Planning Permission by the Local Planning Authority. Compliance with this (and subsequent) method statement(s) will be a requirement of all relevant contracts associated with the development proposals. Copies of this document will be available for inspection on site. The developer will inform the local planning authority if the arboricultural consultant is replaced. This method statement should be read in conjunction with Tree Protection Plans (TPP/LCGRSAH/010 A).

9.0 Phasing of the Works

9.1 The works are proposed to be undertaken in the following phases:

- Pre-Development Works

Confirm temporary site structures, contractors parking and storage areas can be accommodated outside the Construction Exclusion Zones prior to start of the site development. Ensure these will be located so that they do not have to be relocated during the development – or that any change is minimal - thereby avoiding unnecessary vehicle movements on site.

- Confirm operation of the development site with relevant contractors and thereby ensure that proposed tree protection measures are suitable and 'fit for purpose'. If required modify proposed measures whilst still ensuring the protection of trees.
- Confirm that existing fencing within the site can be retained as tree protection. If required specify the use of additional fencing during the site development to protect these trees.
- Undertake pre-development tree works: removal of trees. Remove any vegetation not being retained as part of the site development.

- Demolition Phase

It is assumed that this may run concurrently with the Construction Phase due to the limited number of structures within the site.

- Construction Phase

Confirm Tree Protection Fencing is in place and 'fit for purpose' prior to the start of the relevant part of the Construction Phase.

- Confirm temporary site structures - such as site huts and latrines – contractors parking and storage areas are outside the Construction Exclusion Zones.
- Commence Construction Phase.
- Undertake regular monitoring of the Tree Protection Measures to ensure they remain fit for the purpose of preventing unnecessary damage to trees. Should any unforeseen damage occur then this should be reported to the Local Planning Authority. Remedial tree surgery should be undertaken at the earliest opportunity as approved by a competent and qualified Arboriculturist.
- Completion of Construction Phase and removal of any temporary site structures and stored materials.
- Removal of Tree Protection Fencing.
- Landscaping of the site including removal and replacement of hard standing and installation of footpath links.
- It is advisable to carry out a further tree survey to identify any remedial trees surgery that may be required following the completion of the development. This will include any changes in the condition of the trees that may have occurred from the original survey.

9.2 It is noted that some phases of the work may overlap. For instance some landscaping of the site may occur whilst Tree Protection Measures are still in place.

10.0 Construction Site Access

10.1 During the site development access will be from the proposed access from Chiswell Green Lane. Both these points are outside the RPAs of retained trees. Ground Protection Measures are therefore not proposed as part of this element of the development.

11.0 Tree Protective Fencing

11.1 Root Protection Areas (RPAs) are the minimum areas (in m²) which should be left undisturbed around each retained tree as Construction Exclusion Zones. These areas have been calculated as part of the Arboricultural Survey. The protective distances where possible will be enforced by the use of robust protective fencing as outlined in BS 5837: 2012. The fencing will be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the trees.

11.2 In this instance it is proposed to use the following methods:

- The existing timber and wire fencing (See Photograph D below) will be retained to define the development footprint of the main body of the site. If applicable (or required) additional fencing – as set out below - will be added where the Construction Phase is within that part of the site.
- Timber hoarding will be fixed to timber posts set at 2.0-3.0 m centres (See Photograph E below) will be used to secure the site boundary. If applicable post holes for the timber hoarding will be hand dug using hand held tools and avoiding severance of significant roots of adjacent trees.
- 2.0 m high metal mesh panels within the site. Examples would include Heras fencing (See Photograph F below). The panels will be joined together using a minimum of two anti-tamper couplers to prevent access except for maintenance operations. The distance between the fence couplers will be at least 1.0 m and they will be uniform throughout the fence. Where space does not allow for a full panel to be erected then panels may overlap each other to fill a gap. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to rubber blocks. Where required the site the panels will be staked and secured in place so that they do

not move during the development process. Dust' netting may be fixed to the fencing to prevent airborne material generated during the site development from coating the leaves of trunks of trees.

11.3 The exact composition of the soil is unknown. Clay soil, for instance, compacts very easily when wet, so it is essential that fenced areas remain undisturbed before and during construction to prevent root asphyxiation.

11.4 Laminated site warning signs will be attached to the fencing. These signs will state:

'CONSTRUCTION EXCLUSION ZONE – NO ACCESS

No storage of materials or use of machinery should take place within this area. These fences should remain intact unless under instruction from the site foreman following consultation with an Arborist.'

11.5 Tree Protection Fencing will be erected to protect retained trees before any machinery or pedestrians enter the site in connection with the site development. The position of the fencing is shown on Tree Protection Plan (TPP/LCGRSAH/010 A). Fencing will not be removed or relocated except (temporarily) to allow for grounds maintenance operations. Once the development is complete the fencing may be removed to allow for the removal of hardstanding, the installation of footpaths and the landscaping of the site.



Photograph D – Existing fencing to be retained.



Photograph E – Example of Timber Hoarding Tree Protective Fencing.



Photograph F – Example of Heras Tree Protective Fencing

12.0 Removal, Replacement, and Installation of Hardstanding

12.1 Removal and Replacement (Cypress (T2))

An existing access to the site will be removed as part of the site development. Part will be formed into a footpath and part formed into the landscaped areas of the site.

12.2 Hand held tools or appropriate equipment will be used (under supervision) to remove or scrape the existing hard standing materials within the RPA of this tree. Excavation will be undertaken to existing construction depths and no deeper.

12.3 As soon as the existing hard standing is removed measures must be put in place immediately to protect the underlying soil structure and protect roots from direct and indirect damage (such a desiccation). This will mean that the replacement surface or topsoil will be laid immediately the existing top surface and sub-base are removed. Where possible the existing surface materials will be reused within the development. Topsoil will conform to BS 3882 (2015) - a good quality medium to light loam, free of perennial weeds. Stone content 20% dry weight. The soil will be delivered and stored outside the areas to be landscaped. Where practical localised areas will be forked over to break up any existing soil compaction. The soil will be tipped onto the landscaped area in small loads so as to avoid compaction or smearing of the underlying soil profile. The spreading of soil will be undertaken by landscape operatives using hand held tools such as rakes and forks or suitable machinery under Arboricultural Supervision.

12.4 Roots which are exposed, but are to be retained, will be wrapped in dry, clean hessian sacking to prevent desiccation and to protect from rapid temperature changes. Prior to backfilling, any Hessian wrapping will be removed and the area de-compacted by 'forking over' the surface using hand held tools or suitable machinery. Retained roots will be surrounded with sharp sand or other loose granular fill, before soil or the replacement surface is placed over the roots. Building sand is not acceptable due to its high salt content which is toxic to roots. This material will be free of contaminants and other foreign objects potentially injurious to tree roots.

12.5 Installation of Footpaths (G4-G6)

This will take place within the RPAs of some of these trees. As set out in the AIA the incursions here are considered to be minor and insignificant to the long-term viability of these trees. However the following methodology will be used so that these works are carried out in a planned and controlled way.

15.6 The existing vegetation will be removed from the area of the new footpaths. Both side of the line of the footpaths will be marked out on site. Excavation along these lines will then be undertaken using hand held tools or suitable machinery (under supervision) to the required depth. Any roots that are found will be cut back to just beyond the line of the footpath. The main area of the footpaths can then be excavated without impacting on the roots of trees. As soon as the excavation has occurred then the new surface must be laid immediately to protect the underlying soil structure and protect roots from direct and indirect damage (such a desiccation). The sides of the footpath will be backfilled with topsoil. This will conform to BS 3882 (2015) - a good quality medium to light loam, free of perennial weeds. Stone content 20% dry weight. The soil will be delivered and stored outside the areas to be landscaped.



Photograph G – Showing Cypress (T2) and the existing site access.
This access will be removed and replaced with a footpath link

13.0 Site Organisation and Storage of Materials and Plant

- 13.1 During the proposed construction works attention will be paid to the protection and well being of retained trees. The site will be organised in such a manner so as to minimise the effects of the construction work on trees. This will include defining and containing the development footprint with Tree Protection Fencing where required.
- 13.2 All materials and plant to be used during, or generated by, the Development Phase will be stored outside the enforced tree protection areas. The operation of the site will be undertaken within the constraints imposed by the protection of trees. Where necessary materials will be brought to site in loads which are applicable to that phase of the works. This would help to minimise the development footprint within the site.
- 13.3 All toxic substances such as oils, bitumen's and residues from concrete mixing will be retained by effective catchment areas. No toxic material will be discharged within 10 m of a tree stem. No fires will be lit within 10 m of a tree stem.
- 13.4 All access onto and from the site will be via the Designated Access Route. Temporary site buildings, temporary latrines and any other temporary structures will be outside the Construction Exclusion Zones.

14.0 Landscape Proposals Including Erection of Boundary Treatments

- 14.1 Any landscaping will avoid soil re-grading and unnecessary disturbance within the RPAs of retained trees. Any ground works, such as planting of trees or shrubs or the spreading of top soil, within the RPAs of retained trees will be undertaken using hand held tools, tracked machinery or machinery with low pressure tyres.

15.0 Conclusion

- 15.1 The application is for 'Proposed Residential Development of up to 330 affordable dwellings'.
- 15.2 Of the trees within this report none are recommended for removal for Arboricultural Reasons irrespective of this Planning Application. However the thinning of trees within G5-G6 is recommended as part of their ongoing management and establishment.

- 15.3 These are low quality or unremarkable 'C' Category trees as set out in BS 5837:2012. The trees within G6 are relatively small and set back within the site and are not readily visible to the general public due to intervening vegetation. These trees will need to be removed to introduce a footpath link to the Public Right of Way to the rear of the site. The group to be removed (G2) are located to the front of the site but are not readily visible to the general public due to the contained nature of views brought about by the narrow lane and boundary vegetation. These are also non-native trees which are out of character with this part of the lane. The removal of these trees will not have a substantial impact on the visual amenity of the area or its enjoyment by the general public. Additionally replacement planting is proposed as part of the site development to mitigate for the removal of these trees. Overall the removal of this tree for the site development is not so significant that it would lead to the refusal of Planning Permission.
- 15.4 There will be incursions within, or adjacent to the RPAs and canopy spreads of trees as part of the development of the site. These include for the removal and installation of hardstanding. Overall the incursions within the RPAs have been assessed within the Arboricultural Impact Assessment to either have a minimal and insignificant impact on retained trees or can be reduced to an insignificant level through the use of relevant construction techniques. These are set out within the Arboricultural Method Statement. These will ensure that the development will be completed without having any undue impact on retained trees.
- 15.5 Retained trees will be protected during the site development. This report sets out how retained trees are an important part of the development of the site and how protection and retention of trees will be achieved. The effect on retained trees from the proposals will be minimal given the proposed site layout and conditions and providing that the Arboricultural Method Statement is implemented.
- 15.6 The development is therefore acceptable in arboricultural terms and should receive planning consent.

Appendix A

Arboricultural Survey

Land at Chiswell Green Lane, St Albans, Hertfordshire

1.0 Introduction

- 1.1 I visited the application site in August 2021 to inspect relevant trees in relation to a Planning Application on the site. These trees are within the area of the proposed development and may potentially have some significance to the proposed development. The survey includes the species, size, position and condition of these trees. A full list and description of Survey Terms is given below. The position of these trees has been noted on the accompanying Tree Protection Plans.
- 1.2 This survey has been prepared following guidance set out in BS 5837: 2012 'Trees in relation to design, demolition and construction. Recommendations'. It seeks to offer guidance in relation to planning application discussions or designs for the site. As suggested by BS5837: 2012 all trees with a stem diameter of less than 75 mm at 1.5 m above ground level were excluded from the survey.

2.0 Description of Survey Terms

- 2.1 **Tree Reference Number** is the number allocated as part of this Arboricultural Survey. This may be different from other surveys undertaken on the site and the tree may, or may not, be tagged on site.
- 2.2 **Height** of the tree is measured in metres to the centre of the crown or the highest point of the tree. There is a tolerance of plus or minus 1.0 m.
- 2.3 **Crown Spread** is taken at compass points N, E, S and W from the centre of the tree stem. This is to the nearest 0.5 m. Where tree canopies spread off-site then estimations (est) have been made. With regard to groups the average canopy spread is given. Where individuals within the group are significantly different from this these are shown on the plan and the maximum spread stated within the report.
- 2.4 **Stem Diameters** are taken at 1.5 m above ground level unless otherwise stated. Where measurements of trunk diameter are not possible then estimations (est) have been made. This may be due to ivy on the trunk or where trees are not on the application site. The annotation ms refers to multi-stemmed trees.

- 2.5 **Root Protection Areas** (RPAs) are calculated from stem diameter measurements as set out in BS5837: 2012 'Trees in relation to design, demolition and construction. Recommendations'. RPAs are the areas (in m²) around each retained tree which contain sufficient rooting volume to ensure the survival of the tree. The area will normally be represented on a plan as a circle or polygon. If shown as a circle the **Radius of Root Protection Area Zone** is included.
- 2.6 **Age Class** - A young tree (Y) is within its first 1/3rd of life expectancy. A middle aged tree (MA) is within its second 1/3rd of life expectancy and a mature tree (M) is within its final third of life expectancy. An Over Mature tree (OM) is beyond its average life expectancy and a Veteran (V) is usually beyond the typical age range for the species but of biological, cultural or aesthetic value.
- 2.7 **Physiological and Structural Condition** - Trees in a Good Physiological or Structural Condition have no visible problems or significant defects. Those in a Fair Condition have remedial symptoms or defects or where these symptoms or defects are not remedial but will not affect the **Estimate Remaining Useful Contribution** and those in a Poor Condition have defects which are not remedial and removal of the tree should be considered.
- 2.8 **Comments** give a description of the tree including its general form, description of any physical defects, disease or decay and other appropriate details based on the health, vitality and overall structural integrity. It also includes the environment in which the tree is growing. **Recommendations** for the management of the tree or group will be given where required. Any proposals for removal of trees will need to be agreed with the tree owner.
- 2.9 A tree of good form has a shape that is typical of the species or has amenity in its own right. A tree with moderate form has been affected by its environment and is not typical of the species and has limited amenity value on its own right though it may have a collective amenity with adjacent trees. A tree with poor form has low quality and may also have structural defects which will affect its long term retention. **Canopy height above ground level** is given where this is applicable.
- 2.10 **Estimated Remaining Useful Contribution** is the estimated number of years that the tree will continue to make a safe and useful contribution to its surroundings, taking into account its current age, physiological and structural condition and its current location or environment. This assumes that there will be no changes within its immediate environment.
- 2.11 **Category Grading** - trees have been categorised in accordance with the cascade chart set out within BS5837: 2012 'Trees in relation to design, demolition and construction. Recommendations'.
- 2.12 The trees inspected as part of this report were inspected from the ground only. No samples were taken for analysis. Observations were confined to what was visible from within the site and surrounding public places. A full hazard risk assessment of the trees was not undertaken.

Tree Schedule

Tree Ref No.	Species Common Name (Scientific Name)	Height (m)	Stem Diameter (mm) Root Protection Area (m²)	Radius of Root Protection Area zone (m)	Branch Spread (m)	Age Class	Physiological/ structural Condition	Comments • Preliminary Management Recommendations within Current Environment	Estimated Remaining Useful Contribution (years)	Category Grading
T1	Horse Chestnut (Aesculus hippocastanum)	10	750 est 254.5	9.0	N – 3.5 E – 3.5 S – 3.5 W – 3.5 est	M	Good/Fair	Offsite tree – full inspection of tree not possible. Previously reduced and regrown to form a full crown. Lower end `B` Category. • Undertake reduction works to previous prune points on a regular cycle to maintain structural integrity of these prune points.	20+	B1
T2	Leyland Cypress (x Cuprocyparis leylandii)	13	650 est 191.2	7.8	N – 4.0 E – 3.5 S – 4.5 W – 3.5	M	Fair-Good/Good	Tree of moderate form growing within the verge adjacent to Chiswell Green Lane and an existing access to the site. Previously pruned over the road. Some thinning and dieback in the crown. • No preliminary management recommendations at time of survey.	10+	C1

Tree Ref No.	Species Common Name (Latin Name)	Height (m) range	Stem Diameter (mm) Root Protection Area (m²) <i>Radius of Root Protection Area zone (m)</i>	Branch Spread - general (max) (m)	Age Class (general)	Physiological/ Structural Condition (general)	Comments (general) • Preliminary Management Recommendations	Estimated Remaining Useful Contribution (years)	Category Grading
G1	1 no. Cherry (Prunus spp) and 2 no. Field Maple (Acer campestre)	5-8	175 – 275 13.9 – 34.2 2.1 – 3.3	N – 3.0 (4.0) E – 3.0 (4.0) S – 3.0 (4.0) W – 3.0 (4.0)	MA	Fair-Good/Fair-Good	Growing within grass verge on low bank. Previously pruned. • No preliminary management recommendations at time of survey.	10+	C2

G2	2 no. Leyland Cypress (x Cuprocypris leylandii)	5-6	175 – 200 est 13.9 – 18.1 2.1 – 2.4	N – 4.0 E – 4.0 S – 3.0 W – 3.0 all est	Y-MA	Fair/Fair	Trees growing along the site boundary. Previously poorly pruned. Possibly planted as a hedge or screen. Moderate form. • No preliminary management recommendations at time of survey.	10+	C2
G3	5 no. Common Ash (Fraxinus excelsior)	10-12	150 – 306 est (1 x 150 mm, 1 x 200 mm and 2 x 225 mm diameter stems) 10.2 – 42.4 1.8 – 3.7	N – 3.0 (4.0) E – 2.5 (4.0) S – 2.5 (5.0) W – 3.0 (4.0)	MA	Fair-Good/Fair-Good	Trees growing closely together to site boundary adjacent to Chiswell Green Lane. Adjacent to mound or bank to boundary. Some trees are covered in ivy. Growing within vegetation screen. Full inspection of trees not possible. • Monitor condition of trees and manage accordingly.	10+	C2
G4	Leyland Cypress (x Cuprocypris leylandii) with Sycamore (Acer pseudoplatanus) and Field Maple (Acer campestre)	8-11	100 – 350 est 4.5 – 55.4 1.2 – 4.2	N – 2.0 (4.0) E – 2.0 (4.0) S – 2.0 (4.0) W – 2.0 (4.0)	Y-MA	Fair-Good/Fair-Good	Trees growing closely together to site boundary adjacent to Chiswell Green Lane. • Monitor condition of trees and manage accordingly.	10+	C2
G5	Several trees including Cherry (Prunus spp), Field Maple (Acer campestre) Hornbeam (Carpinus betulus), English Oak (Quercus robur) and Common Hawthorn (Crataegus monogyna)	3-9	250 max est 28.3 3.0	N – 1.0 (4.0) E – 1.0 (4.0) S – 1.0 (4.0) W – 1.0 (4.0) all est	Y	Fair-Good/Fair-Good	Developing trees growing along boundary. Some are growing closely together. • Monitor stakes and remove as required. Undertake formative pruning and thinning of tree stock as required.	10+	C2

G6	Several trees including Cherry (Prunus spp), Common Ash (Fraxinus excelsior), Hornbeam (Carpinus betulus), English Oak (Quercus robur) and Common Hawthorn (Crataegus monogyna)	2-8	200 max est 18.1 2.4	N – 1.0 (3.0) E – 1.0 (3.0) S – 1.0 (3.0) W – 1.0 (3.0) all est	Y	Fair-Good/Fair-Good	Developing trees growing along boundary. Some are growing closely together. • Monitor stakes and remove as required. Undertake formative pruning and thinning of tree stock as required.	10+	C2
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