



ARBORICULTURAL IMPACT ASSESSMENT BS5837

Site: 5 Highbury Road, Hitchin SG4 9RW

Survey Date: 16th December 2025

This arboricultural report provides an assessment of the trees located on the specified site. The report aims to evaluate the health, safety, and amenity value of each tree, and to provide recommendations for their management in accordance with British Standards and local planning requirements during any construction or demolition projects.

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1) Instruction and Terms of Reference

- a) The Eco Arborist has been instructed by Marissa Worcester, a director and the principal architect of Worcester Lloyd Limited to conduct a tree survey from ground level at 5 Highbury Road, Hitchin, Hertfordshire SG4 9RW, to;
 - i) Individually identify species, physiological condition and structural morphology, crown spread, tree dimensions, preliminary management recommendations and ascribe BS5837 (2012) 'Retention Categories'.
 - ii) Estimate as far as necessary above details for off-site trees impacting the project.
 - iii) Number all trees, either individually or in groups
 - iv) Prepare a Tree Schedule
 - v) Produce an Initial Arboricultural Impact Assessment (AIA) that will incorporate Root Protection Areas (RPA) for those tree worthy of retention to assist the Design Team create their plan within the context of tree and habitat.
Then;
 - vi) Produce a Tree Protection Plan (TPP)
 - vii) Produce an Arboricultural Method Statement (AMS)
 - viii) Produce the Final Arboricultural Impact Assessment that is a reference document within and throughout the construction process.

2) Introduction

a) **Assessment Methodology BS5837 - 2012:**

The British Standard BS5837 'Trees in relation to design, demolition, construction - Recommendations' (2012) provides "guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees with structures". The Standard recommends that trees with categories A-C (where A is the highest quality) are a material consideration in the development process. Such trees may then become a constraint for a planning proposal. Category U trees are those that will not be expected to exist for long enough to justify their consideration in the planning process (i.e. no more than 10 years). Trees are then further categorised on their utility within the environment using the number suffix (eg A1,2 &3) as follows 1 - Arboricultural, 2 - Landscape, or 3 - Cultural (including conservation) to signify the trees' merit in each

category. The tree categories are shown on plan by colour-coding for each tree:

- i) Category A (green colour-coded): Good examples of their species with an estimated life expectancy of at least 40 years.
- ii) Category B (blue colour-coded): Not suitable for an 'A' category due to impaired condition or a tree lacking special 'A' qualities: with an estimated life expectancy of at least 20 years.
- iii) Category C (grey colour-coded): Unremarkable trees of very limited merit or with a significant impaired condition not warranting an 'A' or 'B' category: with an estimated life expectancy of at least 10 years. See young trees below.
- iv) Category U (red colour-coded): Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
- v) *Note: Reasonably young trees below 150mm stem diameter would normally be given a C category (if they satisfy the retention quality criteria). However, as they are small, they could be replaced/transplanted and as such they should not be regarded as a significant constraint on a development.*

3) Disclaimers

a) **Trees and building subsidence/heave issues**

Assessing the potential influence of trees upon load bearing soils beneath existing and proposed structures, resulting from water abstraction by trees on shrinkable soils, was not included in the contract brief and is not considered in any detail in the following report. The Eco Arborist cannot be held responsible for damage arising from soil shrinkage or heave issue related to the retention or removal of trees on site.

b) **Tree safety matters and tree risk assessment**

The BS5837 tree survey is carried out in sufficient detail to gather data for and to inform the current project. Our appraisal of the structural integrity of trees on the site is of a preliminary nature and sufficient only to inform the current project. The tree assessment is carried out from ground level – as is appropriate for this type of survey - without invasive investigation. The disclosure of hidden tree defects cannot therefore be expected. Whilst the

survey is not specifically commissioned to report on matters of tree safety, we report obvious visual defects that are significant in relation to the existing and proposed land use. *To further clarify, this BS5837 survey does not constitute a full Visual Tree Assessment that would ordinarily be carried out for Tree Risk Assessment reporting.*

c) **Observations**

This report has been based on my site observations and in light of my experience and qualifications.

d) **Limitations**

The Eco Arborist does not hold any formal qualifications in the areas of structural engineering or law. However, making comment on such matters from an arboricultural perspective is both within the normal scope of our instructions and within the range of the arborist's experience. Specialist professional advice should be sought to clarify/confirm any observations on engineering or legal matters that this report may contain from the appropriate professionals.

4) **Arboricultural Impact Assessment(s) (AIA)**

In line with the BS5837 'Trees in relation to design, demolition and construction – Recommendations' (2012) The Eco Arborist employs the following stages in the surveying and creating the AIA for the site and its tree:

- a) **Preliminary AIA** The initial stage for trees within the development process is a survey of trees that should be retained and those that may/should be removed. Retained trees are allocated Root Protection Areas (RPAs) that are then detailed on a Tree Constraints Plan (TCP). The RPAs provide for sufficient rooting (soil) volume to ensure that trees are successfully retained during and after the completed development. The TCP represents Phase one of an AIA.
- b) **Development AIA** The next stage is for persons involved in site management to factor the tree constraints into draft layout proposals. This draft will then be referred to the consulting Arborist for further impact assessment, to arrive at the 'best fit' scheme, which achieves site proposal viability whilst allowing for the retention of appropriate trees. Once it has been agreed, The Eco Arborist can prepare the supporting report to accompany the planning application.
- c) **Finalised AIA** This stage covers the production of a full report based on the final construction design and AMS and TPP. On-site project implementation through being the projects' arboricultural consultant to include arranging Local Planning Authority approved tree removal or pruning, overseeing the installation of tree protection fencing, ground protection and any special engineering works through to periodic reporting on tree protection measures. Many of these conditions are usually specified in the planning approval conditions that need to be adhered to.
- d) *Note: It is advised that all personnel associated with the construction process are familiar with the specified Tree Protection Plan and Arboricultural Method Statements that affect the site. Copies should be retained on site at all times in the sites project management plan.*
- e) **Preliminary AIA considerations**

We have considered the following BS5837 criteria

 - i) Tree quality assessment

- ii) Crown spread measured to the four cardinal compass points for single trees
- iii) Root Protection Areas (RPAs)
- iv) Tree constraints
- v) *N.B Trees and shrubs are living organisms whose health and condition can change rapidly, for this reason the BS5837 grades along with any conclusions or tree management recommendations remain valid for a period of 12 months.*

5) **Construction Exclusion Zones (CEZS)**

In addition to the three phases, during the development process for retention trees, there may be three and even four constraints to consider which are designated as Construction Exclusion Zone (CEZs)

CEZ 1: Root Protection Area

CEZ 2: Tree Crown Protection

CEZ 3: Tree Dominance

CEZ 4: New Tree Planting Zone – Not applicable here.

a) **CEZ 1: Root Protection Area**

The RPA, calculated in m², should be protected before and during any demolition/construction works. This ensures the effective retention of trees by preventing physical damage to (a) roots and (b) their rooting environment (typical problems - soil compaction, soil level changes and soil capping. With the preliminary AIA, the RPA is indicated on the preliminary Tree Constraints Plan (TCP), as its shape may be subject to amendment as the design progresses. During the development AIA, the derived radial measure is converted by the consulting Arborist into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the tree(s). The means of protecting the RPA will include the installation of Tree Protection Fencing prior to the start of any demolition or construction work on site, the prohibition of various harmful activities within the RPA (e.g. mechanical excavation, soil stripping & trenching, fire lighting, materials storage and creating excessive sealed surfacing), and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA.

b) **CEZ 2: Tree Crown Protection**

This is the area above ground occupied by the tree crown and considers the required demolition/construction working space necessary for the development. The possibility of an acceptable amount of pruning may be considered: subject to Council permission/ planning consent. Considerations will include providing adequate separation distance between retention trees and new buildings.

c) **CEZ 3: Tree Dominance**

This is the area above ground dominated by the tree in relation to issues of shading,

seasonal debris and the safety apprehension by the site owner/occupier. This area is assessed by considering the height and spread of the tree (current and future) relative to the proposed buildings, cross referenced with the intended end-use. As such, what is assessed is the likely psychological effect of the tree(s) on the end-user. The purpose of identifying tree dominance is to protect trees from post-development pressure by the site's end-users, who may, if resentful of the trees, seek to procure excessive pruning treatments (i.e. the bad practice of topping & lopping) or even to have them removed. This is a common LPA (Local Planning Authority) concern, which may lead to application withdrawals, refusals and/or dismissed Appeals. The means of protecting tree dominance is likely to include optimising the site layout and room type (especially in relation to new residential dwellings), such that any adverse impacts of trees are reduced to an acceptable minimum. The key principle is to ensure adequate separation distances between trees and new buildings: notably with habitable space & primary windows.

d) ***CEZ 4: New Tree Planting Zone – Not applicable here.*** Statutory Controls

6) Statutory Tree Protection

Trees can be protected in law – via Tree Preservation Orders (TPOs) or by virtue of them growing in a Conservation Area – by the Government's Town & Country Planning Act 1990. (the Act).

- a) Trees may also be protected by Planning Conditions. If any of these apply, written LPA permission/consent is required before protected trees can be pruned or felled*. Contravention of the Act may carry a fine of up to £20,000 and a criminal record.
- b) *Exceptions include those trees that are dead/hazardous or those that are causing an actionable nuisance to a third-party. In any event, evidence must be provided to defend the removal of such trees.*
- c) Checks are completed with the Local Planning Authority and Estate Management teams regarding conservation area status and TPOs applicable on a site-to-site basis.

7) **Wildlife Legislation**

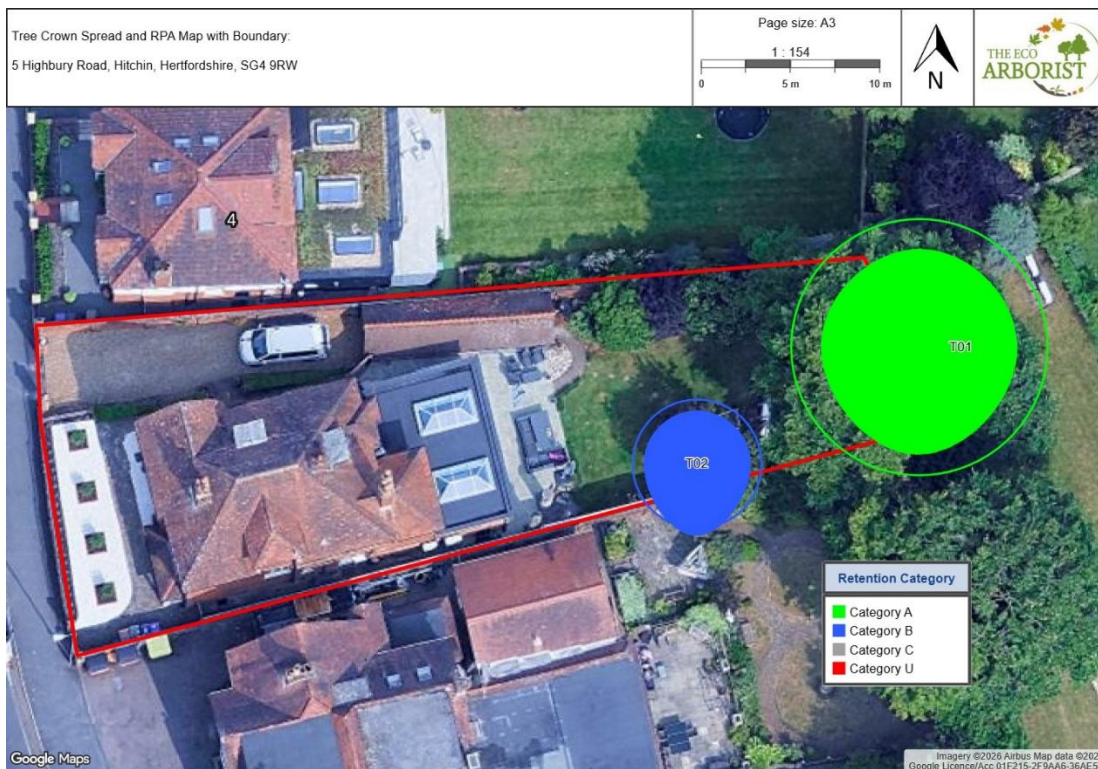
The Wildlife and Countryside Act (1981) Chapter 69 forms the basis for the legal wildlife protection in Great Britain. Amongst other protected flora and fauna, nesting birds and all species of bat are afforded statutory protection.

- a) It is recommended that the client and/or their agent review the Act - <http://www.jncc.gov.uk/page-3614> - for further information and guidance.
- b) **Wildlife Habitats:** A cursory assessment of wildlife habitat values of trees and hedgerows on the site was carried out during the survey. No protected or exceptional habitats were identified and details were not recorded. However, trees and hedgerows of most species provide valuable nesting sites for a wide range of birds, and it is likely that nesting birds will be present on the site during the period March to September. We have not been made aware of the presence of roosting bats and have not identified any obvious signs of roost sites. However, this does not mean that roost sites are absent, and a separate bat survey may be required.

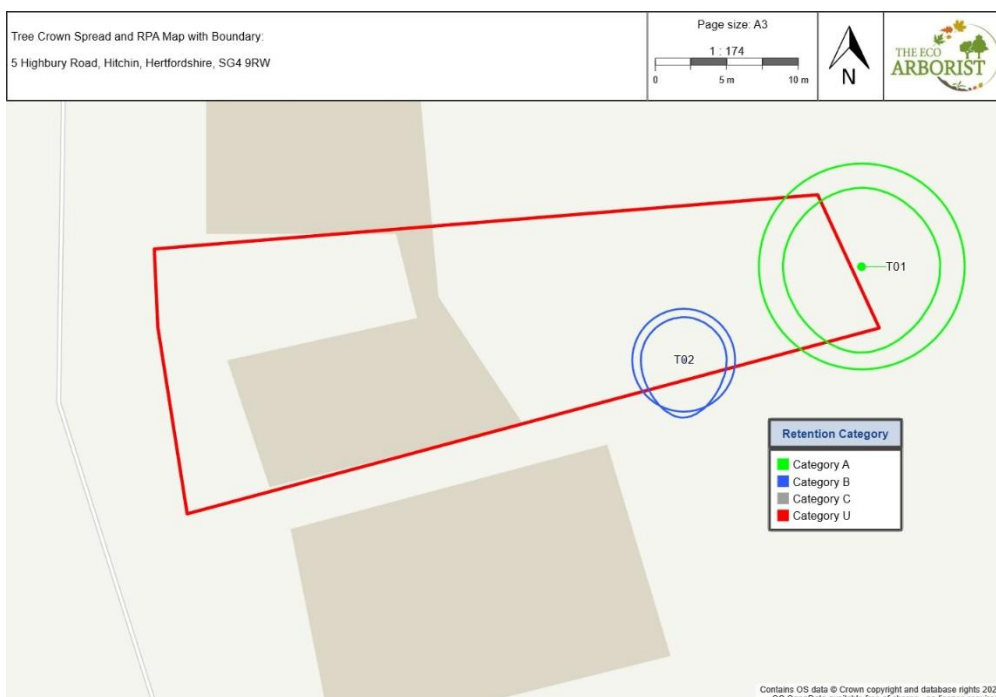
8) The Site and Development Proposal

a) **Site description:** The site consists of a detached property with parking off Highbury Road. The development is to be an oak framed outbuilding at the end of the rear garden (see proposal schematic).

b) **Aerial View of Site:**



c) **UK OS Mapping of Site showing Crown Spread and RPA for Trees:**



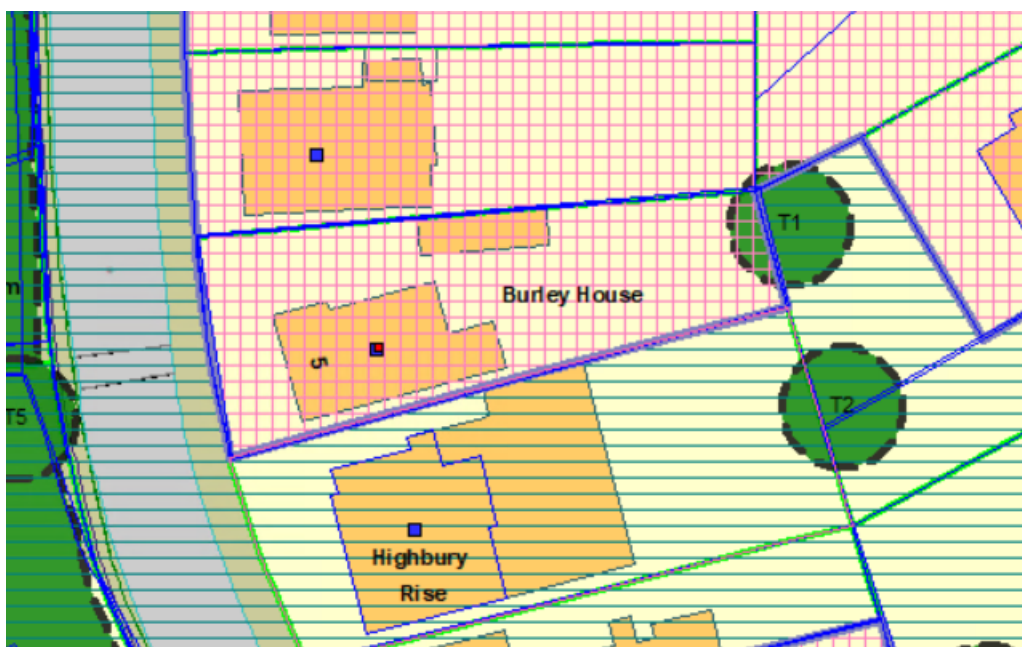
9) Trees on site

a) Two trees on site have been surveyed on site as part of this project:

Ref	Species	Height (m)	Crown Spread (m)	Life Stage	Rem Contribution	Grade
T01	Common beech (<i>Fagus sylvatica</i>)	13 m	5.5N 5.5E 6S 5.5W	Mature	40+ Years	A 1,2 & 3
T02	Plum (<i>Prunus domestica</i>)	5m	3N 3E 4S 3W	Over Mature	10+ Years	B 1, 2

Figure 1: Trees Surveyed at 5 Highbury Road

b) Tree T01 is a tree in the neighbouring property and at the time of writing this report has a Tree Preservation Orders in place.



LPA TPO Map – T1 has a TPO and relates to T01 on this project.

- c) The RPA of tree T01 comes within the proposed development site. Tree T02 is a smaller tree within the site, and as such is currently accommodated within the proposal.
- d) The proposed development site falls within a Conservation Area.

i) Image of T01 - Mature Beech (Fagus sylvatica) Tree:



ii) *Note: The optimum time to prune Beech Trees is Spring (Late) or Summer. Prune sympathetically as Beech trees respond poorly to pruning – advice given by The Arboricultural Association.*

iii) Image of T02 – Mature Plum (Prunus domestica) Tree:



iv) *Note: Summer is the best time for pruning Plum trees to avoid the fungal sporulation period (Autumn) – advice given by the Arboricultural Association.*

e) **Trees off site** – No trees were surveyed and deemed not to have an impact on the project above that already assessed for T01 and T02.

f) **Impact proposal on trees**

BS5837 Tree Survey Recommendations

Client: Worcester Lloyd Limited

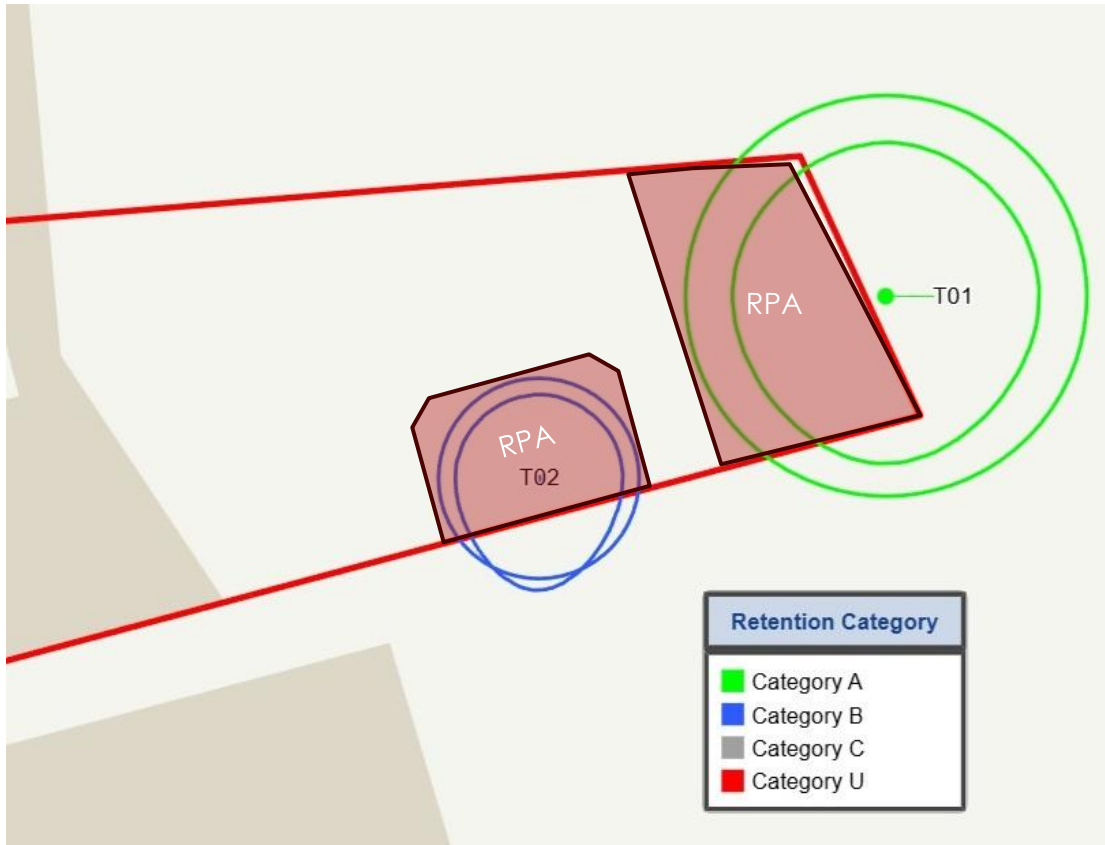
Site: 5 Highbury Road



Ref.	Species	Pre-Construction Recommendation	During Construction Recommendations	Post Construction Recommendations
T01	Common beech (<i>Fagus sylvatica</i>)	1: Crown Lift of the branches immediately over the proposed structure to a height of 6 meters to prevent the damage to any limbs during installation. 2: Crown Reduction of the complete tree (back to previous cut points of 1-1.5 meters in height and width) so as to not have any damage from falling limbs on the roof or structure over the next 5-7 years. 3: Conduct a climbing tree survey during options 1 or 2 so that all hazards such as diseased or deadwood would be removed for the benefit of the owner and the new structure. 4: Feeding of the tree with a liquid feed as the leaf buds start to open (March).	1. The ground screw footings should be no closer than 2.5 meters from the centre of the stem. This will mean only radial roots may be impacted. Move the two rear central screws outside this area. 2. The use of larger diameter screws on the four corners and the front and sides may offset these movements. 3. No heavy plant to move or be stored within the RPA. 4. Building materials to be stored within the garden, to the West of the tree, outside of the RPA. 5. Maintain hydration of the tree during the build phase, on both sides of the boundary wall to ensure good mineral and fluid uptake to the tree.	Visual Tree Assessment
T02	Plum (<i>Prunus domestica</i>)	Light pruning of any branches on the North face (inside the garden) likely to be snagged by construction phase. Feeding of the tree with a liquid feed as the leaf buds start to open (March).	No heavy plant to move nor building materials to be stored within the RPA of this tree. Maintain hydration of the tree during the build phase to ensure good mineral and fluid uptake to the tree.	Visual Tree Assessment

Construction Recommendations for Trees affecting Project.

g) **CEZ 1: Root Protection Areas (RPAs)** There is clear guidance in the AIA to ensure that there is no soil compaction or adverse effects on the roots during the construction phase of this project. The use of ground screws to minimise the impact on roots is a recognised way to minimise impact of the secure footings for an outbuilding, which is detailed in the AIA. The use of the floating structure ensures good air and water transfer into the root system, and the low impact installation negates soil compaction in the RPAs.



RPA Plan for T01 and T02

- h) **CEZ 2: Tree Crown Protection Zones:** Tree T01 is to undergo a light Crown Lift in order to remove any damage caused by the erection phase of the wooden outbuilding.
- i) **CEZ 3: Tree Dominance Zones:** The recommendation is for T01 and T02 to undergo a Crown Reduction and pruning works before works commence in order to minimise the need to work on the trees over the coming 5-7 years.
- j) **CEZ 4: New Tree Planting Zone:** *There are no such issues with this development.*

k) **Tree protection during construction**

Tree Protection: The protection of retention trees is paramount to the granting of planning permission, the discharge of tree protection Planning Conditions, the design of the development and the future health, stability and success of the trees. It is widely recognised that mature trees add value to both land and property values.

- l) **Root Protection Area (RPA):** RPAs around retention trees should be maintained by the erection of a Temporary Tree Protection barrier (TPB) around T02. *Note: The position and extent for the TPB will normally concur with the radius/squared area of the RPA. This staked-off area shall be known as the Construction Exclusion Zone (CEZ). The integrity of the TPB to protect CEZs should be maintained for the duration of the entire development works.*

m) **Arboricultural Method Statement (AMS)**

We have included an Arboricultural Method Statement (AMS), which details working methods in relation to trees. This AMS lays down the methodology for any demolition and/or construction works that may have an effect upon trees on and adjacent to this site. It is essential within the scope of any contracts - related to this development - that this AMS is observed and adhered to. It is recommended that this document forms part of the work schedule and that specifications are issued to the building contractor(s) and these should be used to form part of their contract.

- n) **Site Agent** – This is an authorised individual nominated to be responsible for all arboricultural matters on site.

i) This person must:

- (1) Be present on site for the majority of the time
- (2) Be aware of the Tree Protection Plan and through that the tree protection measures to be installed and maintained throughout the build phase.
- (3) Have the authority to stop any work that is causing, or has the potential to cause, harm to any retention trees.
- (4) Be responsible for ensuring that all site operatives are aware of their responsibilities towards on/off site trees and the consequences of the failure to observe these responsibilities.
- (5) Make immediate contact with the designated consulting Arborist in the event of any tree related problems occurring, whether actual or potential.
- (6) If conflicts between any part of a tree and the build arise in course of development these can – and should be – resolved quickly and at little

costs if a qualified and experienced consulting Arborist is contacted promptly.

- (7) Completes the Arboricultural Site Monitoring Form (attached) on a weekly basis (or if an infraction occurs) and keeps it securely filed throughout the scheme of works.

10) **Conclusions**

- a) This project has been well developed and is using sustainable and low impact techniques. The trees around the project will be well served through the implementation of the AIA and supporting documents.

The Eco Arborist supports the approach undertaken by the Architects and the Owners of the property in treating the site and its trees with respect and offering them all due protection throughout the phases of the project.

11) **Recommendations**

- a) **Execution of contract**

It is recommended that the Architect specifies in writing to the building contractor that tree care conditions apply throughout the execution of the contract. Lack of care towards these conditions can result in the damage, decline and eventual death of trees. This can adversely affect design aims & site saleability and reflects poorly on the contractors and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of finished developments.