O2 Masterplan Site, Finchley Road

Arboricultural Impact Assessment

Version 1, January 2022

Prepared for LS (Finchley Road) Limited by Pell Frischmann

Landsec

Pell Frischmann

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Prepared for

LS (Finchley Road) Limited

100 Victoria Street
London
SW15 5JL

Prepared by

Pell Frischmann

Burrator House
Rydon Lane
Exeter
EX2 7NT

Landsec

Pell Frischmann

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Executive Summary

Site Name	O2 Masterplan Site, Finchley Road
Location	The Site is located in Finchley, within the London Borough of Camden (LBC). It is bounded by Blackburn Road, which envelops the Site along its southern and northern edge, also extending to the west. Finchley Road (A41) bounds the Site to the east, with Billy Fury Way to the west. The Thameslink Bedford-Brighton railway line runs along the northern edge of the Site, and the London Underground Jubilee and Metropolitan lines run above ground along the southern edge of the Site. The Site is approximately 5.7 ha in size and currently comprises the O2 Centre, which is arranged over three floors and contains a cinema, a mix of retail units, restaurants and cafes, a health club, a community room and a Sainsbury's store; hard-standing, which is used as a car-park with space for 520 vehicles and a Homebase store, and to the western part of the Site are two purpose-built car showrooms and a builder's merchant.
Development proposals	Part detail and part outline planning permission for the redevelopment of land encompassing the O2 Centre and associated car park, Homebase store, car showrooms and a Builder's Merchant to provide new homes (including affordable housing) and commercial and community uses.
Site Survey Baseline	One-hundred and ten individual trees, and one group of trees, comprising a total of nine species were recorded. Of the individual trees: • 5 have been placed in Category A, • 47 in Category B, • 56 in Category C; and • 2 in Category U. One group of trees were identified during the survey and identified as Category C. The term 'Group' is intended to identify any trees that form cohesive arboricultural features, either aerodynamically, visually or culturally (including for biodiversity).
Likely Impacts	The arboricultural survey identified trees of landscape value within the Site and the immediate northern Site boundary. This impact assessment aims to inform the scheme in relation to impacts on trees. This impact assessment must be updated once detailed development plans are available, including full construction and compound working area.
Recommendations	The Proposed Development should take the RPA of trees and groups of trees into consideration. If avoidance or suitable protection measures cannot be adopted, there is potential for there to be adverse impacts on Category A and B trees. Under BS5837:2012 the Scheme design should be informed by the presence of any notable trees (such as those in Category A and B) and steps taken to avoid adverse impacts wherever possible. Only in circumstances where impacts cannot be avoided should Category A and B trees be removed. In these cases, BS5837:2012 requires that adequate mitigation be put in place for their replacement on a 'like-for-like basis' taking into consideration maturity, longevity and biodiversity value of the original tree. It is therefore a requirement under the standard for the Proposed Development design team to consider ways in which the Category A and B trees can be safely retained during both the construction and operational phases. Suitable tree protection measures are outlined in Section 7. Provisional mitigation measures have been outlined and will require updating once the final detailed design development plans are available (including full construction footprint and location of utilities).

1 Introduction

This Arboricultural Impact Assessment (AIA) has been prepared and submitted by Pell Frischmann (PF) on behalf of LS (Finchley Road) Limited (the "Applicant"), to support an application made in part in detail and part in outline (the "Application") for the demolition and redevelopment of land encompassing the O2 Centre and associated car park, Homebase store, car showrooms and a Builder's Merchant (the "Site") within the London Borough of Camden ("LBC").

Development Plots N3-E, N4 and N5 and the associated landscaping, access roads and infrastructure form the detailed element of the Application which extends to 1.79ha and these proposals are referred to as the "Detailed Proposals".

The remainder of the Application (comprising Development Plots N1, N2, N3, N6, N7, S1 and S8) is submitted in outline and these proposals are referred to as the "Outline Proposals".

The Detailed Proposals and Outline Proposals together are referred to as the "Proposed Development".

Full details and scope of the Applications is described in the submitted Planning Statement, prepared by Gerald Eve LLP.

This report aims to inform the Proposed Development regarding impacts on trees and identify impacts and mitigation required.

1.1 Objectives and Scope

The objectives of this Arboricultural Assessment were to evaluate the overall condition of the trees on, and adjacent to the Site. The arboricultural impacts of both the construction and operational phases of the Proposed Development were considered; along with the potential impacts to trees which may be affected by construction or access works which may be located some distance from the actual Site boundary.

A Tree Constraints Plan has been produced to inform the Proposed Development. A full impact assessment and Tree Protection Plan can be produced once a finalised development and construction plan has been issued.

The arboricultural survey aims to assess the following:

- the suitability of trees for retention as categorised in accordance with BS 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations';
- the constraints presented by the trees;
- impacts of the Proposed Development in relation to any retained trees;
- the arboricultural impacts of the Proposed Development; and
- the requirements for tree management where appropriate.

British Standard (BS) 5837: 2012 '*Trees in relation to design, demolition and construction – Recommendations*' requires that information on the constraints associated with retained trees be sent to the Proposed Development design team. This information is detailed in a Tree Constraints Plan. The constraints, which are covered by BS 5837, are associated with issues relating to retained trees both above and below ground, and the necessary measures to ensure their safe retention.

1.2 Site Location and Description

The Site is located in Finchley, within the London Borough of Camden (LBC). It is bounded by Blackburn Road, which envelops the Site along its southern and northern edge, also extending to the west. Finchley Road (A41) bounds the Site to the east, with Billy Fury Way to the west. The Thameslink Bedford-Brighton railway line runs

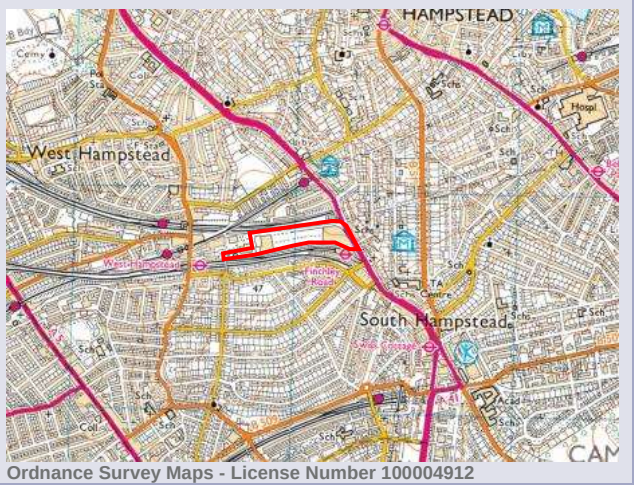
along the northern edge of the Site, and the London Underground Jubilee and Metropolitan lines run above ground along the southern edge of the Site.

The Site is approximately 5.7 ha in size and currently comprises the O2 Centre, which is arranged over three floors and contains a cinema, a mix of retail units, restaurants and cafes, a health club, a community room and a Sainsbury's store; hard-standing, which is used as a car-park with space for 520 vehicles and a Homebase store, and to the western part of the Site are two purpose-built car showrooms and a builder's merchant.

The land contained within the red line plan (Figure 1) comprises the following (thereafter referred to as 'the Site'):

- O2 Centre;
- Associated O2 Centre car park;
- Homebase store;
- Car showrooms; and
- Builder's merchant.

Figure 1 Site Location Plan



Ordnance Survey Maps - License Number 100004912

1.3 Descriptions of Development

The Application is for the following Proposed Development:

"*Part full and part outline planning permission comprising the following:*

Detailed planning permission for Development Plots N3-E, N4, and N5 including demolition of existing above ground structures and associated works, and for residential development (Class C3) and commercial, business and service (Class E) uses in Development Plot N3-E, residential development (Class C3) and local community (Class F2) and commercial, business and service (Class E) uses in Development Plot N4, and residential development (Use Class C3) and commercial, business and service uses (Class E) uses in Development Plot N5 together with all landscaping, public realm, cycle parking and disabled car parking, highway works and infrastructure within and associated with those Development Plots."

Outline planning permission for Development Plots N1, N2, N3, N6, N7 ,S1 and S8 including the demolition of all existing structures and redevelopment to include residential development (Class C3) commercial, business and service uses (Class E), sui generis leisure uses (including cinema and drinking establishments) together with all landscaping, public realm, cycle parking and disabled car parking, highway works and infrastructure within and associated with those Development Plots."

1.4 Application Structure and Phasing

The Application is submitted in hybrid form – this means that (part of the application is made in detail and part is made in outline).

The Application site has been subdivided into 10 Development Plots (N3-E, N4 and N5 N1, N2, N3, N6, N7, S1 and S8).

The first three Development Plots (N3-E, N4 and N5), located in the centre of the Site, are submitted in detail, and form the first phase – "**Detailed Phases**".

Development Plots S8, N7 and N6 located in the west of the Site are submitted in Outline and form the Second Phase - "**Outline Phases West**".

Development Plots N3, N2, N1 and S1 located in the east of the Site are submitted in Outline and form the third Phase – "**Outline Phases East**".

Overarching text on Development Plots and phases:

The Application site has been subdivided into 10 Plots (N1, N2, N3, N3-E, N4, N5, N6, N7, S1 and S8). These are identified on Parameter Plan. 19066_X_(02)_102. The 10 plots sit within three indicative phases. Phase 1 covers the Detailed Proposals and is located at the centre of the Site. Phase 2 (also referred to as Outline Phases West) and Phase 3 (also referred to as Outline Phases East) form the Outline Proposals.

2 National Legislation and Policy

2.1 Legislation

2.1.1 Town and Country Planning Act

Tree Preservation Orders and Conservation Areas

Under the Town and Country Planning Act 1990, local planning authorities (LPA's) have a duty to make provision for the preservation and planting of trees when granting permission for new developments.

The Town and Country Planning Act affords LPA's with the power to make Tree Preservation Orders (TPO) where it is practical. This will usually be in the interests of amenity and enable the LPA to make provision for the preservation of trees and woodlands.

TPOs are used to protect specific trees, groups of trees and woodlands where removal would result in a significant adverse effect to the local amenity.

A TPO should not be used to prevent development, or the removal of trees in order to impede a development. However, a TPO does prevent unauthorised removal or works, and ensures that trees, groups of trees or woodlands are fully considered within the planning process.

Conservation Areas are areas which have been designated due to its special architectural or historic interest which is considered desirable to preserve or enhance. Trees, groups of trees, or woodland within a conservation area are considered to positively contribute towards the character, appearance and general amenity of a conservation area. Trees within a conservation area, if not protected by a tree preservation order, are protected by the provisions in section 211 of the Town and Country Planning Act 1990.

TPO's and Conservation Areas (under Section 211 of the Town and Country Planning Act 1990) makes it a statutory offence to carry out any of the following works to trees without the formal consent of the LPA (for TPO's) or without first providing the LPA with six weeks' notice of intent (for conservation areas) -

- Cutting down;
- Topping;
- Lopping;
- Uprooting;
- Wilful damage; and
- Wilful destruction.

Certain exemptions apply for works to trees within conservation areas and therefore can bypass the usual six weeks' notice of intent to carry out work to trees. These include, but are not limited to -

- The making safe of dangerous trees where there is an immediate risk of serious harm;
- The removal of dead wood or dead trees;
- Work necessary to abate an actionable legal nuisance; and
- Where work is necessary to implement a grant of full planning consent.

2.1.2 Forestry Act 1967

The Forestry Act 1967 sets out the requirements for the felling of growing trees and states when trees can and cannot be felled. Exemptions that apply are outlined under Section 9 (4)(d) of the Act which allows developers to legally fell trees which:

"…*is immediately required for the purpose of carrying out development authorised by planning permission granted or deemed to be granted under the Town and Country Planning Act 1990 or the enactments replaced by that Act*".

2.1.3 Natural Environment and Rural Communities Act 2006

LPA's and government departments are required to have regard for the conservation of biodiversity when exercising their normal functions under Section 40 of the Natural Environment and Rural Communities Act (NERC) 2006. This includes communities and habitats formed by animals and plants, as well as fungi and micro-organisms.

Trees are considered to be integral elements of the natural environment. This may be due to their rarity (e.g. Common Juniper (*Juniperus communis*)), their part of an important habitat (e.g. ancient woodland) or because they directly support another species (e.g. a bat roost or nesting bird). Widespread, common or even non-native tree species are also important as they contribute towards a sustainable natural environment.

Trees and their biodiversity value must be considered during all development activities. Trees should be retained wherever practicable and opportunities taken to maintain and enhance their environmental contribution.

2.1.4 Trees on Third-Party Land

Roots and branches which cross property boundaries and encroach onto neighbouring land are deemed to be a nuisance under Common Law as they have the potential to affect the owner/occupier's use of their own land. The landowner can legally decrease this nuisance by cutting back encroaching roots or branches to the edge of their property if required.

However, the following considerations must be followed:

- No duty to give notice to the tree owner is required – however it is considered courteous to provide some notice;
- All work must be undertaken without trespass onto the neighbouring property unless agreed otherwise with the landowner;
- All arisings from tree works remain the property of the tree owner – these should be offered back to the landowner and only disposed of with their permission; and
- All work must be undertaken with reasonable skill and in accordance with any relevant best practice guidance.

The potential for future nuisance must be considered when undertaking new tree planting within development landscape schemes. This includes the likely effects of encroaching roots and branches onto neighbouring land. Sufficient room for future growth and movement due to wind must be considered within the landscape planting scheme to avoid the possibility of direct damage to boundary walls, fences and properties.

2.2 Planning Policy

2.2.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF 2021) paragraphs 174 to 182 set out the Government's policies on conserving and enhancing the natural environment through the planning system. These policies are expected to be incorporated into development planning documents at regional and local scales and are also of material worth in considering individual planning applications.

Paragraph 174(b) states - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

Paragraph 180(c) states – development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

2.2.2 Local Planning Policy

Camden Local Plan

The Camden Local Plan was adopted by the council in July 2017 and has replaced the previous Core Strategy and Camden Development Policies. The Local Plan is used as the basis of planning decisions and to inform the future of development within the Borough.

Policy A3 states that the Council will require the following in relation to trees and vegetation:

- resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation;
- require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 'Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;
- expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;
- expect developments to incorporate additional trees and vegetation wherever possible.

Camden Planning Guidance

The Camden Planning Guidance: Trees (2019) was prepared to support the policies within the Camden Local Plan and is aimed at developers, landlords and residents wishing to undertake development which could impact on existing trees, or where they wish to plant new trees,

This guidance requires sufficient information from the developer to determine that tree protection and canopy cover has been considered within the development, including the identification of Tree Preservation Orders or Conservation Areas within, or with proximity to, the Site,

This guidance outlines the steps required at the planning application stage which include a tree survey of existing trees and woody vegetation to BS5837:2012 to identify the key constraints and root protection areas. This should be updated in line with the Tree Officers pre-application advice and clear plans produced to identify how existing trees will be protected during construction.

The London Plan

The London Plan (2021) Chapter 8 covers Green Infrastructure and Natural Environment. In particular the following policies should be considered within the Proposed Development :

- Policy G7 addresses Trees and Woodlands and states trees should be protected, and where new trees are planted this should be in appropriate locations. Therefore, developments should aim to protect trees where possible and if this is not possible, adequate replacements are required.

London Environment Strategy

The London Environment Strategy (2018) focusses on a range of actions to improve the environment across London to create a 'better future'.

Objective 5.2 addresses the aim of Conserving and Enhancing Wildlife and Natural Habitats through Policy 5.2.1 which aims to protect a core network of nature conservation sites and ensure a net gain in biodiversity. This will be done by:

- Proposal 5.2.1.b The Mayor will develop a biodiversity net gain approach for London, and promote wildlife-friendly landscaping in new developments and regeneration projects

2.3 Guidance and Standards

2.3.1 British Standard BS 5837:2012

British Standard BS 5837:2012 is the standard for 'Trees in Relation to Design, Demolition and Construction. The standard sets out the principles and procedures to be applied during the design and construction process to ensure a positive relationship is achieved between trees and structures. BS5837 is applicable whether or not planning consent is required for a development.

2.3.2 Ancient Woodland and Veteran Trees

Ancient semi natural woodland consists of any wooded area which has been wooded continuously since at least 1600 AD and has protection under the NPPF. Ancient Woodlands are described as irreplaceable habitats as per Natural England's standing advice which states that LPA '*should refuse planning permission if development will result in the loss or deterioration of ancient woodland, ancient trees and veteran trees unless:*

- *there are wholly exceptional reasons; or*
- *there's a suitable compensation strategy in place.*

To protect Ancient Woodland and Veteran Trees during development, The Forestry Commission and Natural England have published guidance (known as 'standing advice'). This standing advice is a material consideration during the planning process and should therefore be considered when making decisions on relevant planning applications. This standing advice was last updated in November 2018 and states the following:

- '*For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you're likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic*'.
- '*A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter'*.

3 Survey Methodology

The arboricultural survey was undertaken by suitably qualified surveyors from Pell Frischmann on the 16th February 2021. The weather was fine, and visibility was good.

The survey area is shown in The Site is located in Finchley, within the London Borough of Camden (LBC). It is bounded by Blackburn Road, which envelops the Site along its southern and northern edge, also extending to the west. Finchley Road (A41) bounds the Site to the east, with Billy Fury Way to the west. The Thameslink Bedford-Brighton railway line runs along the northern edge of the Site, and the London Underground Jubilee and Metropolitan lines run above ground along the southern edge of the Site.

The Site is approximately 5.7 ha in size and currently comprises the O2 Centre, which is arranged over three floors and contains a cinema, a mix of retail units, restaurants and cafes, a health club, a community room and a Sainsbury's store; hard-standing, which is used as a car-park with space for 520 vehicles and a Homebase store, and to the western part of the Site are two purpose-built car showrooms and a builder's merchant.

The land contained within the red line plan (Figure 1) comprises the following (thereafter referred to as 'the Site'):

- O2 Centre;
- Associated O2 Centre car park;
- Homebase store;
- Car showrooms; and
- Builder's merchant.

Figure 1 and trees which are adjacent to the Site which may also be affected by the proposed development have also been considered. Access to measure these trees was not always possible.

Trees were photographed and measured for height, crown spread, and stem diameter. The physical and structural condition of each tree, or group of trees, was noted. Recommendations made for tree work or on-going maintenance requirements are detailed in the Tree Survey Schedule presented as Appendix A.

Tree were recorded using Otiss BS5837 software. Survey data is shown on the Tree Survey Schedule (Appendix A) and Tree Constraints Plan (Appendix B).

3.1 Principal Trees: Age Classification

The following classification has been employed:

- Young: Saplings and young trees under 10 years of age.
- Semi-Mature: Trees older than 10 years but less than one third of the life expectancy of their species, normally making substantial extension growth.
- Mature: Trees between one third and two thirds of the life expectancy of their species. Approximately full height and girth, increasing only slowly over time.
- Over mature: Trees beyond two thirds of the life expectancy of their species. No significant extension growth. Crown starting to break up and decrease in size.
- Veteran Trees are beyond the over mature stage but because of their size and age are significant features within the landscape and which can be rejuvenated and conserved by appropriate management.

3.2 Tree Survey and Tree Condition

The surveyor assessed the individual condition of the trees identified within the area. The assessment of condition is based on a visual inspection only.

Each tree was assessed by consideration of the following:

- any visible structural defects,
- the size and form and the suitability of its position,
- the location with regard to the position of other relevant features.

3.3 Categories for Tree Constraints Plan

Individual trees are assessed and then placed into one of four categories as detailed below. For tree numbers please refer to the appended Tree Constraints Plan in Appendix B.

- Category A (marked Green on the Tree Constraints Plan). Trees which are significant, and which must be retained, wherever possible, within the layout. Category A trees which are particularly good examples of their species or are essential components of a group (e.g. the dominant and/or principal trees within an avenue).
- Category B (marked Mid Blue on the Tree Constraints Plan). These trees should be retained, wherever possible, within any development proposals. These trees have been downgraded due to impaired condition, such that they are unlikely to be suitable for retention beyond 40 years.
- Category C (marked in Grey on the Tree Constraints Plan). Trees which do not have sufficient arboricultural merit to constrain development proposals.
- Category U (marked in Red on Tree Constraints Plan). Trees which will not remain safe features beyond the short term and should be removed as part of any development proposals.

BS5837 requires that trees are further identified according to any particular merits defined as:

- Arboricultural specimens – subdivision 1
- Trees of landscape importance – subdivision 2
- Trees with ecological, historical or cultural significance – subdivision 3

The design layout should allow for the retention of Category A and B trees where possible. Category C trees should only be retained in locations where they will not over constrain development proposals or present additional amenity issues.

Mitigation will be required for the loss of any trees, or groups of trees, which have been classified as Category A or B.

3.4 Root Protection Area

BS5837 defines the Root Protection Area (RPA) as 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”.

For each tree the RPA has been calculated. For single stem trees, the RPA is calculated as an area equivalent to a circle with a radius 12 times the stem diameter. For trees with more than one stem, the RPA has been calculated using the Helliwell Method with each stem being measures at 1.5m above ground level to calculate the basal area in m2. The shape and position of the RPA may be adjusted by the arboriculturalist to take into consideration Site factors such as soil type and depth, prevailing wind, slope and drainage or built structures such as roads or footings. The overall size of the RPA cannot be changed.

3.5 Key for the Tree Survey Schedule

Table 3-1 Key for the Tree Survey Schedule	
Height	Measured with clinometer in metres

Table 3-1 Key for the Tree Survey Schedule	
Stem Diameter	Diameter measured at 1.5 m from ground level with tape in mm
Spread area (N,S,E,W)	Crown spread measured in metres at the points on the compass
Height of Crown Clearance	In metres to inform on ground clearance, shading and crown to stem ratio.
Age Class	Y-Young, SM – Semi-mature, M-Mature, OM- Over mature, V-Veteran
Physiological Conditions	Good, Fair, Poor, Dead
Structural Condition	Visual evidence of the presence of decay or danger of collapse
Category Grading	A-good, B-Moderate, C-Poor, U-Dead or dangerous

4 Survey Results

The survey results are shown in the Tree Survey Schedule presented in Appendix A. The layout and root protection areas are shown in the Tree Constraints Plan presented in Appendix B. Trees have been assessed individually or in groups where several similar trees form a single management unit.

4.1 TPO's and Conservation Areas

Information obtained from the London Borough of Camden Planning Department indicated that there are no Tree Preservation Orders (TPO's) or Conservation Areas within the Site.

Surrounding the Site, the South Hampstead Conservation Area lay immediately south of the red line with TPO's in every street to the south of the red line. The Redington Frognal Conservation Area lies immediately across the other side of Finchley Road to the east of the Site. The West End Green Conservation Area lies to the north of the red line boundary in Lymington Road, Fawley Road and West End lane amongst others.

This information can be provided on request.

4.2 General Site Description

The Site was dominated by hardstanding car park, with buildings including the O2 Centre forming the eastern Site boundary, Homebase, a car wash, two car dealerships and a builder's yard and associated buildings in the western portion of the Site.

Scattered landscape tree planting was present within the central car park area and car dealerships. Trees surveyed in these areas were generally young and within pedestrian walkways and shrub planting. Some signs of damage have been identified, likely from cars 'bumping' into the tree base.

Mount Fuji cherry (*Prunus shirotae*) was dominant within the car park, while Callery pear (*Pyrus calleryana*) was mostly planted along the car park boundaries. Newly planted rowan (*Sorbus aucuparia*) were also present and have likely replaced trees that have been in poor condition. Hornbeam (*Carpinus betulus*) were dominant with the car dealerships and mature London plane (*Platanus x hispanica*) were present along Billy Fury Way.

Sycamore (*Acer pseudoplatanus*) and ash (*Fraxinus excelsior*) were present along the northern boundary with Network Rail land and also within a group along the southern boundary. These trees were off-site but included within the survey as the RPA is likely to extend within the Site and there is potential for them to be impacted by construction works.

4.3 Recorded Trees

One-hundred and ten individual trees, and one group of trees within nine species were recorded including:

- Ash — *Fraxinus excelsior*
- Callery pear — *Pyrus calleryana*
- Cherry — *Prunus sp*.
- Hornbeam — *Carpinus betulus*
- London plane — *Platanus x hispanica*
- Maple — *Acer sp.*
- Mount Fuji cherry — *Prunus shirotae*
- Rowan — *Sorbus aucuparia*
- Sycamore — *Acer pseudoplatanus*

A selection of photographs taken during the walkover survey are included in Figure 2.

Figure 2 Site Survey Photographs

T001 – T003 Callery pear line the edges of the car park

T017 is an example of the Mount Fuji cherry that dominates the main car parking area

T098-T103 along Billy Fury Way

T022 with basal trunk damage. This type of damage is present on several trees.

T49 to T53 have been assessed as category B as they create landscape screening along the southern boundary of the car park

T033 newly planted rowan – in general these trees have been excluded of this assessment due to their size not meeting the BS5837 threshold

4.4 Classification

Of the individual trees, 5 have been placed in Category A, 47 in Category B, 56 in Category C and 2 in Category U.

One group of trees were identified during the survey and identified as Category C. The term 'Group' is intended to identify any trees that form cohesive arboricultural features, either aerodynamically, visually or culturally (including for biodiversity).

4.5 Individual Trees

4.5.1 Category A

Five London plane trees along Billy Fury Way have been identified as Category A due to their important landscape impacts. These trees are mature but have the potential to live for an additional 80+ years as they are suited to urban areas and resistant to pollution. They screen the adjacent student block and footpath from the Site. In addition, they would likely provide habitat for nesting birds.

4.5.2 Category B

Forty-seven trees were identified as Category B for their landscape value within the Site. These trees have all been surveyed as individuals and when grouped together they form a good landscape screening within the various parts of the Site including between the current carpark and the railway lines to the south of the Site,

within the car dealership car parks and the off-site trees along the northern Site boundary. In general, these trees are young to semi-mature, and it would take several years to replace them like for like to provide the same landscape screening if removed during construction.

One London plane tree (T098) was downgraded to a Category B due to its structure. This tree is unlikely to survive beyond 80 years deo to the nature of the multi-stems.

These trees are also of an ecological value to pollinators such as bees within this densely urban location.

4.5.3 Category C

Fifty-six trees have been identified as Category C and mostly consist of the young trees within the car park. Many of these trees have basal damage to the trunk, most likely from cars knocking into them, and would likely not survive to maturity within future development. These trees do not provide any arboricultural significance, although are of an ecological value to pollinators such as bees within this densely urban location.

4.5.4 Category U

One Mount Fuji cherry (T030) was placed in Category U and is likely dead or dying as was the only tree not to have budded leaves and cherry blossom during the survey.

One sycamore (T097) was also categorised as Category U due to very poor condition as this tree was growing through the chain-link fence along the builder's yard and unlikely to survive.

4.6 Groups of Trees

No groups of trees were identified as Category A, B or U.

4.6.1 Category C

G083 is an off-site group along the southern Site boundary on Network Rail land and consisted of sycamore, ash and buddleia. Most of the trees were assessed as being unable to grow to maturity due to poor form and therefore placed into Category C. No access was available to assess these trees in detail.

5 Impact Assessment

The Proposed Development consists of the works which form a hybrid planning application for the demolition and redevelopment of land encompassing the O2 Centre and associated car park, Homebase store, car showrooms and a Builder's Merchant.

The arboricultural survey identified trees of landscape value within the Site and adjacent to the immediate northern Site boundary. This draft impact assessment is based on the Proposed Development informs the scheme in relation to impacts on trees.

This impact assessment must be updated once the full detailed design stage, including construction footprint and compounds areas, are available.

5.1 Arboricultural Impacts

Category A London plane trees along Billy Fury Way will be incorporated into the Proposed Development and remain in-situ during development. These trees may only be removed under exceptional circumstances.

Based on the Proposed Development, the majority of trees within the central section of the Site would be removed during development, including Category B Callery pear trees along the southern boundary of the existing car park and Category B hornbeam within the car dealership carparks. These Category B trees should be retained where possible to enable the existing screening to be maintained from the access road and railway, and where not possible will be replaced as part of the mitigation tree planting within the landscape plan.

6 Recommendations

6.1 Mitigation Measures

The Proposed Development should take the RPA of trees and groups of trees into consideration.

If avoidance or suitable protection measures cannot be adopted, there is potential for there to be adverse impacts on Category A and B trees. Under BS5837:2012 the Proposed Development should be informed by the presence of any notable trees (such as those in Category A and B) and steps taken to avoid adverse impacts wherever possible.

Only in circumstances where impacts cannot be avoided should Category A and B trees be removed. In these cases, BS5837:2012 requires that adequate mitigation be put in place for their replacement on a 'like-for-like basis' taking into consideration maturity, longevity and biodiversity value of the original tree.

It is therefore a requirement under the standard for the Proposed Development design team to consider ways in which the Category A and B trees can be safely retained during both the construction and operational phases. Suitable tree protection measures are outlined below in Section 7.

Provisional mitigation measures have been outlined below and will require updating once the detailed design plans are available (including full construction footprint and location of utilities).

6.1.1 Tree Works and Landscape Planting

All remedial tree works must be undertaken to BS 3998: 2010 *Tree Work – Recommendations*.

Individual Category A and B trees within the Site should be protected as detailed in Section 7. Any Category C trees being retained must also be protected. An Arboricultural Method Statement should be produced to ensure that the retained trees are not impacted.

Where this is not possible, replacement tree planting will be required and should be detailed within the Proposed Development's Landscape Management Plan. Suitable replacement planting should include native species such as Sargent's rowan (*Sorbus sargentiana*), fastigiate oak (*Quercus robur fastigiata*), hornbeam (*Carpinus betulus*) and cherry (*Prunus sp*).

Site soil conditions require further investigation to enable new or replacement tree pits to be designed within the Proposed Development. The current choice of species has been limited by the constraints of the car park environment. A far wider range of tree and shrub species and sizes can be considered within a residential context. The change of use will require additional trees to provide green infrastructure, enhance biodiversity and to improve air quality.

Where trees are to be retained within the Proposed Development, steps should be taken to ensure that existing soil and moisture levels are maintained. Where adverse changes in levels or surface water are unavoidable, consideration should be given to tree replacement.

7 Tree Protection Measures

BS 5837 specifies that a Tree Protection Plan (TPP) should be prepared to show the impact of the proposed development on existing trees within the Site.

The TPP will be prepared when the detailed design layout has been finalised and provide an accurate Construction Exclusion Zone (CEZ) can be calculated. Other areas of land; where soil will need to be protected from compaction or contamination, will also be identified. This will be prepared once more detailed development plans are available.

Information from the TPP should be incorporated into subsequent drawings and method statements to ensure that all interested parties are fully aware of the areas in which access and works may and may not take place.

The following protection measures have been recommended for all construction works where excavation or other activities could impact on retained trees.

7.1 Construction Exclusion Zone (CEZ)

During construction, care must be taken to ensure that the existing ground levels around trees are maintained as trees are sensitive to any changes in water level or factors which alter the aeration of the root system.

As a general guide, the full root protection area (RPA) should be observed, and BS 5837 adhered to (see the Tree Constraints Plan in Appendix B).

BS 5837 states that all retained trees or groups of trees should be protected by RPAs marked by the erection of a protective barrier. The Tree Constraints Plan and the Tree Survey Schedule shows the RPA for each tree or group of trees.

BS 5837 specifies the minimum RPA in square metres rather than a radial distance; the final barrier position will be shown on the draft TPP, which will be completed once the development layout has been finalised.

BS 5837 enables the professional arborist to make small changes to the shape (but not the area) of the RPA to fit with local conditions.

The TPP should also detail routes for services and Site facilities.

If services need to pass through the CEZ, directional drilling or thrust boring techniques must be employed at a suitable depth (≥ 1 metre) under the trees. This will minimise damage to tree roots. Any works which need to take place within the CEZ must be notified to the project arborist in advance. The project arborist should produce a suitable arboricultural method statement for the works and may recommend that the work is undertaken under a professional watching brief.

7.2 Protection Measures for Retained Trees

Retained trees will require ground protection around their RPA using a combination of barriers and ground protection. All barriers should conform to the standard specified in BS 5837:2012 and are shown in Figure 3 below.

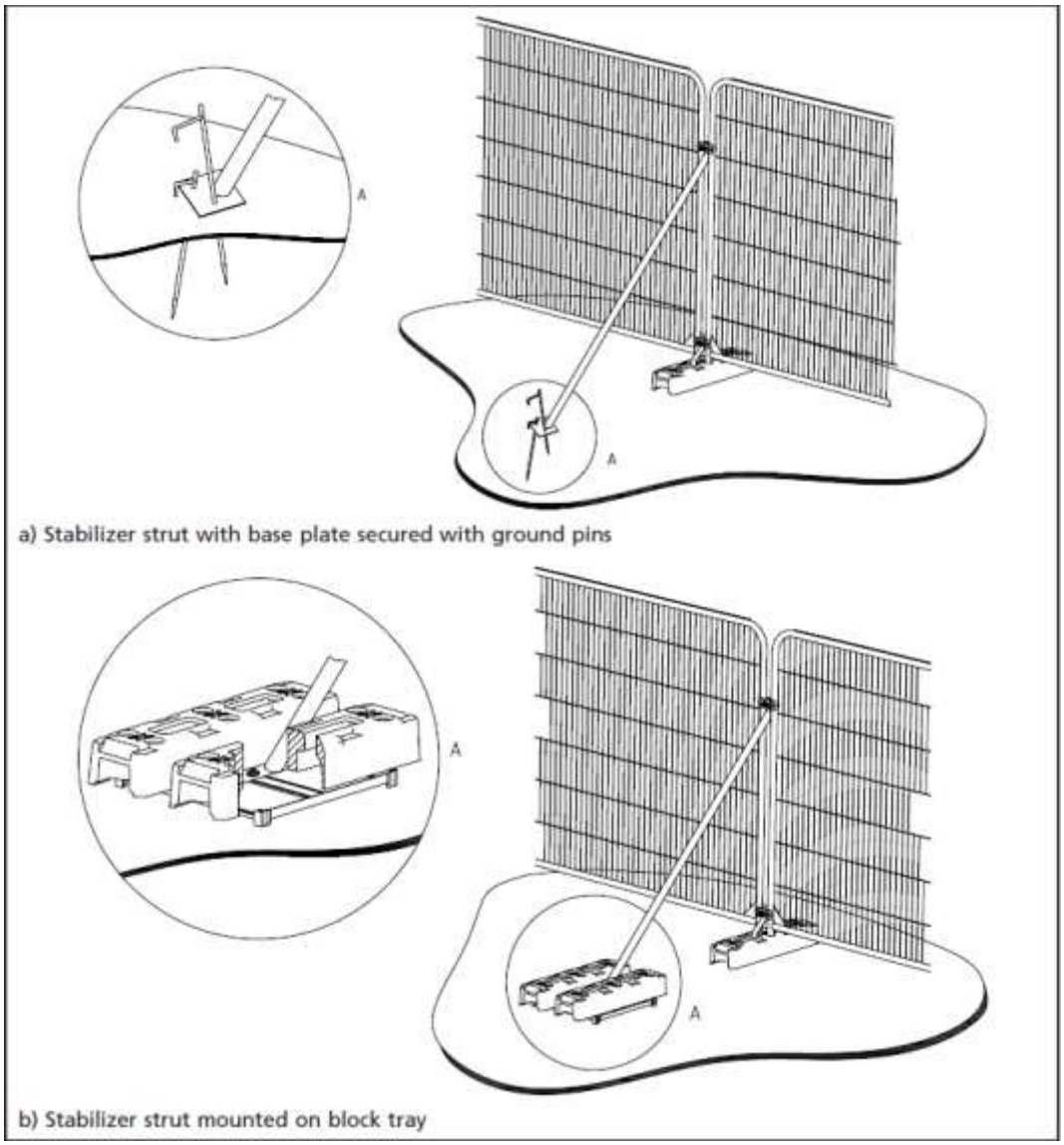
The protective barriers should comprise a scaffold frame from which “heras” type fencing (or similar) should be firmly attached. The barrier must be strong enough to protect the trees from the expected level of construction activity and should be constructed so that it cannot be easily moved.

Once the exclusion zone has been protected by barriers and/or ground protection, construction work can commence. All weather notices must be erected on the barriers stating: “Construction Exclusion Zone KEEP

OUT". It is recommended that the protective fencing is erected under the supervision of an arborist to ensure that adequate protection is provided.

The location of protective barriers will need to be shown on the TPP. Once the protective fencing is in place it should be inspected by the project arborist, who should then inform the local authority tree officer that the erection work has been completed.

Figure 3 Tree Protection Fencing



7.3 Measures to Protect Roots of Retained Trees

It may be possible to incorporate walkways alongside existing trees by using "no-dig" construction techniques such as cellular confinement systems. It is possible for these systems to occupy up to 20% of the total area of a Root Protection Area of a retained tree.

Paving and other permanent surfaces should be laid onto a flexible base to allow movement and to facilitate re-laying if distortion becomes excessive. Cellular containment systems such as "Cellweb" or similar aggregate retaining products allow for root plate movement. These should be laid under the guidance of an experienced arborist to ensure that roots are fully protected. Cellular confinement systems are laid over the existing ground surface and no prior excavation should be undertaken.

It is essential that the block paving or other surfaces which are proposed are fully porous to allow water and air to reach the roots of retained trees.

Full arboricultural method statements should be produced for this type of activity and a suitably experienced arborist should be on Site to supervise key operations. Roots of many trees are already being protected by existing asphalt, paving and resin surfaces which can be retained temporarily during construction for this purpose.

7.4 Other Protection Measures

Other protection measures to be considered during construction include:

- Material which will contaminate the soil, such as concrete mixings, diesel and vehicle washings, should not be discharged within 10 metres of the tree stem;
- Notice boards, telephone cables or other services should not be attached to any part of the tree;
- Fires should not be lit within 5 metres of any tree trunk, branch or foliage; and
- No materials or rubbish should be left within the CEZ.

8 Arboricultural Report Limitations

The information reported is based only on the interpretation of data collected during the survey undertaken on Site. The condition and size of the trees is likely to change with time.

This report has been prepared by Pell Frischmann with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client.

This report does not seek to address the specific area of subsidence risk. Any discussion of soil characteristics is included only where they may affect tree or root growth. Queries regarding subsidence will require a separate specialist report to be commissioned.

This report has been prepared solely for the use of Land Securities and may not be relied upon by other parties without written consent from Pell Frischmann. In addition, it must be understood that this report does not constitute legal advice.

Pell Frischmann disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

9 References

BS 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'

BS 3998: 2010 'Tree Work - Recommendations'

Lonsdale D. Principles of Tree Hazard Assessment and Management. TSO London 1999

National Joint Utilities Group (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. Volume 4, issue 2. London:

National Planning Policy Framework (2021) [online]. Available:https://www.gov.uk/guidance/national-planning-policy-framework/15-conserving-and-enhancing-the-natural-environment

Pell Frischmann Preliminary Ecological Appraisal (2021) Reference 104878-PEF-ZZ-XX-RP-GE-400000.

Appendix A Tree Survey Schedule

Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T001	Callery Pear	*Pyrus calleryana*	1	170		Radius: 2.0m. Area: 13 sq m.	2	2	2	2	Young		C
T002	Callery Pear	*Pyrus calleryana*	1	170		Radius: 2.0m. Area: 13 sq m.	2	2	2	2	Young		C
T003	Callery Pear	*Pyrus calleryana*	1	155		Radius: 1.9m. Area: 11 sq m.	2	2	2	2	Young		C
T004	Mount Fuji cherry	*Prunus shirotae*	1	250		Radius: 3.0m. Area: 28 sq m.	3.5	3.6	3.7	3.8	Young		C
T005	Mount Fuji cherry	*Prunus shirotae*	1	190		Radius: 2.3m. Area: 17 sq m.	2	2	2	2	Young		C
T006	Mount Fuji cherry	*Prunus shirotae*	1	230		Radius: 2.8m. Area: 25 sq m.	3	3	3	3	Young		C
T007	Mount Fuji cherry	*Prunus shirotae*	1	230		Radius: 2.8m. Area: 25 sq m.	2	2	2	2	Young		C
T008	Mount Fuji cherry	*Prunus shirotae*	1	390		Radius: 4.7m. Area: 69 sq m.	3	3	3	3	Young		C
T009	Callery Pear	*Pyrus calleryana*	1	190		Radius: 2.3m. Area: 17 sq m.	2	2	2	2	Young		C
T010	Callery Pear	*Pyrus calleryana*	1	190		Radius: 2.3m. Area: 17 sq m.	2	2	2	2	Young		C
T011	Callery Pear	*Pyrus calleryana*	1	225		Radius: 2.7m. Area: 23 sq m.	2	2	2	2	Young		C
T012	Callery Pear	*Pyrus calleryana*	1	120		Radius: 1.4m. Area: 6 sq m.	1	1	1	1	Young		C
T013	Callery Pear	*Pyrus calleryana*	1	190		Radius: 2.3m. Area: 17 sq m.	2	2	2	2	Young		C
T014	Callery Pear	*Pyrus calleryana*	1	190		Radius: 2.3m. Area: 17 sq m.	2	2	2	2	Young		C

Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T015	Mount Fuji cherry	*Prunus shirotae*	1	220		Radius: 2.6m. Area: 21 sq m.	2	2	2	2	Young		C
T016	Mount Fuji cherry	*Prunus shirotae*	1	240		Radius: 2.9m. Area: 26 sq m.	2	2	2	2	Young		C
T017	Mount Fuji cherry	*Prunus shirotae*	1	210		Radius: 2.5m. Area: 20 sq m.	2	2	2	2	Young		C
T018	Mount Fuji cherry	*Prunus shirotae*	1	150		Radius: 1.8m. Area: 10 sq m.	2	2	2	2	Young		C
T019	Cherry	*Prunus sp. (Cherries)*	1	140		Radius: 1.7m. Area: 9 sq m.	1.5	1.5	1.5	1.5	Young		C
T020	Mount Fuji cherry	*Prunus shirotae*	1	140		Radius: 1.7m. Area: 9 sq m.	1	1	1	1	Young		C
T021	Mount Fuji cherry	*Prunus shirotae*	1	160		Radius: 1.9m. Area: 11 sq m.	1	1	1	1	Young		C
T022	Cherry	*Prunus sp. (Cherries)*	1	150		Radius: 1.8m. Area: 10 sq m.	1	1	1	1	Young		C
T023	Mount Fuji cherry	*Prunus shirotae*	1	150		Radius: 1.8m. Area: 10 sq m.	1	1	1	1	Young		C
T024	Mount Fuji cherry	*Prunus shirotae*	1	145		Radius: 1.7m. Area: 9 sq m.	1.5	1.5	1.5	1.5	Young		C

Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T025	Mount Fuji cherry	*Prunus shirotae*	1	100		Radius: 1.2m. Area: 5 sq m.	1.5	1.5	1.5	1.5	Young		C
T026	Mount Fuji cherry	*Prunus shirotae*	1	160		Radius: 1.9m. Area: 11 sq m.	1.5	1.5	1.5	1.5	Young		C
T027	Mount Fuji cherry	*Prunus shirotae*	1	140		Radius: 1.7m. Area: 9 sq m.	1.5	1.5	1.5	1.5	Young		C
T028	Mount Fuji cherry	*Prunus shirotae*	1	170		Radius: 2.0m. Area: 13 sq m.	1.5	1.5	1.5	1.5	Young		C
T029	Mount Fuji cherry	*Prunus shirotae*	1	130		Radius: 1.6m. Area: 8 sq m.	1	1	1	1	Young		C
T030	Mount Fuji cherry	*Prunus shirotae*	1	110		none - due to Retention Category of U.	1	1	1	1	Dead		U
T031	Mount Fuji cherry	*Prunus shirotae*	1	130		Radius: 1.6m. Area: 8 sq m.	1	1	1	1	Young		C
T032	Mount Fuji cherry	*Prunus shirotae*	1	180		Radius: 2.2m. Area: 15 sq m.	1	1	1	1	Young		C
T033	Rowan	*Sorbus aucuparia*	1	60		Radius: 0.7m. Area: 2 sq m.	0.5	0.5	0.5	0.5	Newly planted		C
T034	Rowan	*Sorbus aucuparia*	1	50		Radius: 0.6m. Area: 1 sq m.	0.5	0.5	0.5	0.5	Newly planted		C
T035	Mount Fuji cherry	*Prunus shirotae*	1	230		Radius: 2.8m. Area: 25 sq m.	2	2	2	2	Young		C
T036	Mount Fuji cherry	*Prunus shirotae*	1	230		Radius: 2.8m. Area: 25 sq m.	2	2	2	2	Young		C
T037	Mount Fuji cherry	*Prunus shirotae*	1	190		Radius: 2.3m. Area: 17 sq m.	2	2	2	2	Young		C
T038	Mount Fuji cherry	*Prunus shirotae*	1	210		Radius: 2.5m. Area: 20 sq m.	2	2	2	2	Young		C
T039	Cherry	*Prunus sp. (Cherries)*	1	240		Radius: 2.9m. Area: 26 sq m.	2	2	2	2	Young		C

Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T041	Cherry	*Prunus sp. (Cherries)*	1	300		Radius: 3.6m. Area: 41 sq m.	3	2	3	2	Young		C
T042	Mount Fuji cherry	*Prunus shirotae*	1	220		Radius: 2.6m. Area: 21 sq m.	2	2	2	2	Young		C
T043	Mount Fuji cherry	*Prunus shirotae*	1	310		Radius: 3.7m. Area: 43 sq m.	1.5	1.5	1.5	1.5	Young		C
T044	Mount Fuji cherry	*Prunus shirotae*	1	210		Radius: 2.5m. Area: 20 sq m.	2	2	2	2	Young		C
T047	Cherry	*Prunus sp. (Cherries)*	1	160		Radius: 1.9m. Area: 11 sq m.	1	1	1	1	Young		C
T048	Mount Fuji cherry	*Prunus shirotae*	1	160		Radius: 1.9m. Area: 11 sq m.	1	1	1	1	Young		C
T049	Callery Pear	*Pyrus calleryana*	1	190		Radius: 2.3m. Area: 17 sq m.	1.5	1.5	1.5	1.5	Semi Mature		B2
T050	Callery Pear	*Pyrus calleryana*	1	130		Radius: 1.6m. Area: 8 sq m.	1	1	1	1	Semi Mature		B2
T051	Callery Pear	*Pyrus calleryana*	1	160		Radius: 1.9m. Area: 11 sq m.	1	1	1	1	Semi Mature		B2
T052	Callery Pear	*Pyrus calleryana*	1	150		Radius: 1.8m. Area: 10 sq m.	1	1	1	1	Semi Mature		B2
T053	Callery Pear	*Pyrus calleryana*	1	190		Radius: 2.3m. Area: 17 sq m.	2	2	2	2	Semi Mature		B2
T054	Callery Pear	*Pyrus calleryana*	1	160		Radius: 1.9m. Area: 11 sq m.	1.5	1.5	1.5	1.5	Semi Mature		B2
T055	Callery Pear	*Pyrus calleryana*	1	120		Radius: 1.4m. Area: 6 sq m.	1	1	1	1	Semi Mature		B2
T056	Callery Pear	*Pyrus calleryana*	1	130		Radius: 1.6m. Area: 8 sq m.	1	1	1	1	Semi Mature		B2
T057	Callery Pear	*Pyrus calleryana*	1	130		Radius: 1.6m. Area: 8 sq m.	0.5	0.5	1	0.5	Semi Mature		B2
T058	Callery Pear	*Pyrus calleryana*	1	150		Radius: 1.8m. Area: 10 sq m.	1	1	1	1	Semi Mature		B2

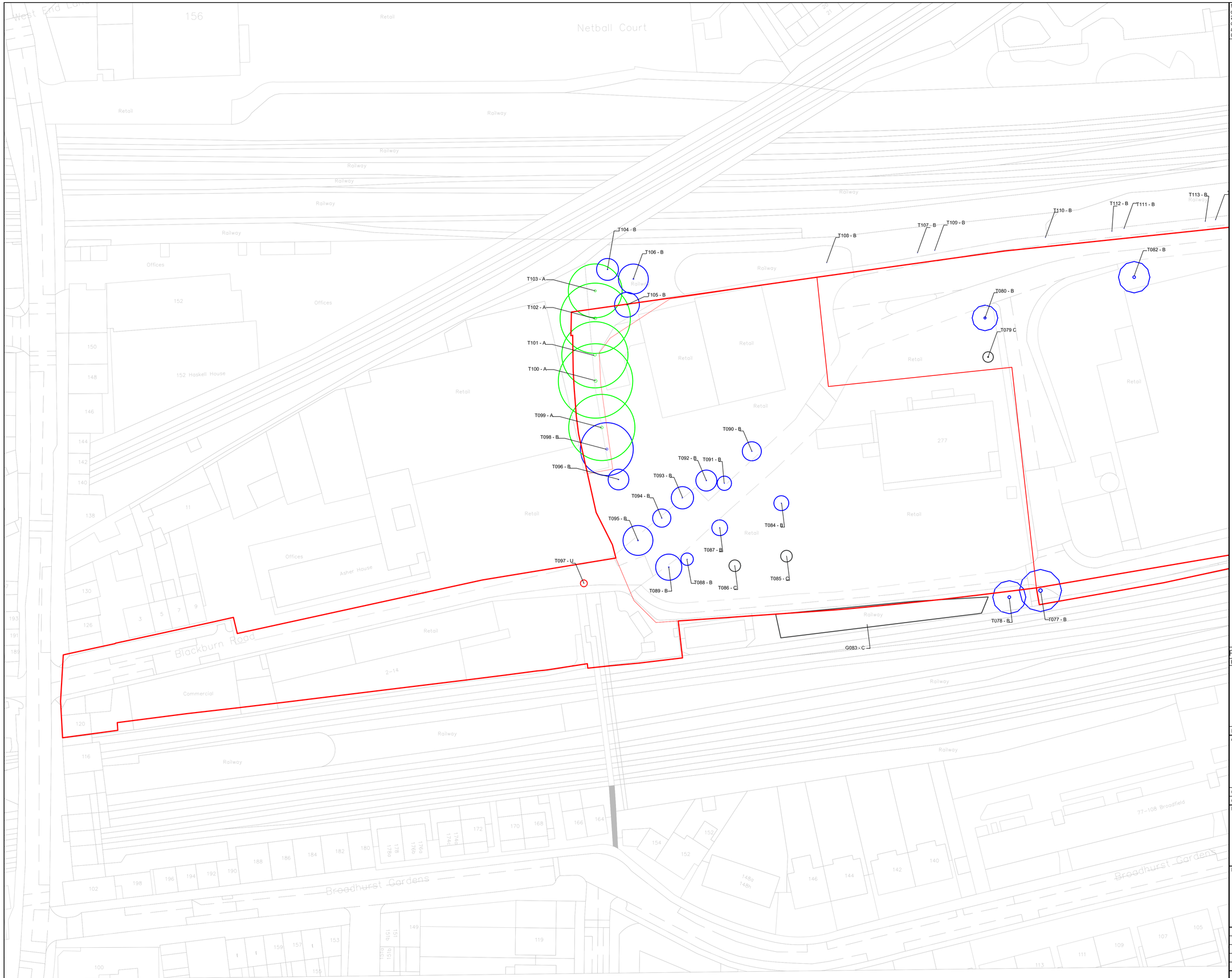
Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T059	Callery Pear	*Pyrus calleryana*	1	220		Radius: 2.6m. Area: 21 sq m.	1.5	1.5	1.5	1.5	Semi Mature		B2
T060	Callery Pear	*Pyrus calleryana*	1	250		Radius: 3.0m. Area: 28 sq m.	2	2	2	2	Semi Mature		B2
T061	Callery Pear	*Pyrus calleryana*	1	220		Radius: 2.6m. Area: 21 sq m.	2	2	2	2	Semi Mature		B2
T062	Callery Pear	*Pyrus calleryana*	1	180		Radius: 2.2m. Area: 15 sq m.	2	2	2	2	Semi Mature		B2
T063	Callery Pear	*Pyrus calleryana*	1	190		Radius: 2.3m. Area: 17 sq m.	1.5	1.5	1.5	1.5	Semi Mature		B2
T064	Callery Pear	*Pyrus calleryana*	1	210		Radius: 2.5m. Area: 20 sq m.	2	2	2	2	Semi Mature		B2
T065	Callery Pear	*Pyrus calleryana*	1	150		Radius: 1.8m. Area: 10 sq m.	2	2	2	2	Semi Mature		B2
T066	Callery Pear	*Pyrus calleryana*	1	270		Radius: 3.2m. Area: 32 sq m.	1.5	1.5	1.5	1.5	Semi Mature		B2
T067	Callery Pear	*Pyrus calleryana*	1	200		Radius: 2.4m. Area: 18 sq m.	1.5	1.5	1.5	1.5	Semi Mature		B2
T068	Callery Pear	*Pyrus calleryana*	1	280		Radius: 3.4m. Area: 36 sq m.	2.5	2.5	2.5	2.5	Semi Mature		B2
T069	Callery Pear	*Pyrus calleryana*	1	100		Radius: 1.2m. Area: 5 sq m.	0.5	0.5	0.5	0	Young		C
T070	Callery Pear	*Pyrus calleryana*	1	230		Radius: 2.8m. Area: 25 sq m.					Semi Mature		C
T071	Callery Pear	*Pyrus calleryana*	1	260		Radius: 3.1m. Area: 30 sq m.	2	2	2	2	Semi Mature		C
T072	Callery Pear	*Pyrus calleryana*	1	220		Radius: 2.6m. Area: 21 sq m.	1.5	1.5	1.5	1.5	Semi Mature		C
T073	Callery Pear	*Pyrus calleryana*	1	240		Radius: 2.9m. Area: 26 sq m.	1.5	1.5	1	1.5	Semi Mature		C
T074	Mount Fuji cherry	*Prunus shirotae*	1	180		Radius: 2.2m. Area: 15 sq m.	2	2	2	2	Young		C

Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T075	Mount Fuji cherry	*Prunus shirotae*	1	280		Radius: 3.4m. Area: 36 sq m.	2.5	2.5	2.5	0.5	Young		C
T076	Mount Fuji cherry	*Prunus shirotae*	1	140		Radius: 1.7m. Area: 9 sq m.	2	2	2	2	Young		C
T077	Mount Fuji cherry	*Prunus shirotae*	1	510		Radius: 6.1m. Area: 117 sq m.	5	5	5	5	Semi Mature		B2
T078	Ash, Common	*Fraxinus excelsior*	1	400		Radius: 4.8m. Area: 72 sq m.					Young		B2
T079	Sycamore	*Acer pseudoplatanus*	1	130		Radius: 1.6m. Area: 8 sq m.	1	1	1	1	Young		C
T080	Mount Fuji cherry	*Prunus shirotae*	1	310		Radius: 3.7m. Area: 43 sq m.	2	2	2	2	Young		B2
T081	Maple	*Acer sp.*	1			none - no Retention Category specified.					Young		C
T082	Mount Fuji cherry	*Prunus shirotae*	1	380		Radius: 4.6m. Area: 66 sq m.	4	4	4	4	Semi Mature		B2
G083	Common Ash Sycamore	*Fraxinus excelsior Acer pseudoplatanus*	2			Area: 361.34 sq m.					Young	Off-site group along NR land	C
T084	Rowan	*Sorbus aucuparia*	1	180		Radius: 2.2m. Area: 15 sq m.	3	3	3	3	Young		B2
T085	Rowan	*Sorbus aucuparia*	1	140		Radius: 1.7m. Area: 9 sq m.	2	2	2	2	Young		C
T086	Rowan	*Sorbus aucuparia*	1	140		Radius: 1.7m. Area: 9 sq m.	2	2	2	2	Young		C
T087	Hornbeam	*Carpinus betulus*	1	190		Radius: 2.3m. Area: 17 sq m.	1	1	1	1	Young	Split to 2 stems just after the 1.5m mark	B2
T088	Hornbeam	*Carpinus betulus*	1	150		Radius: 1.8m. Area: 10 sq m.	2	2	2	2	Young		B2
T089	Hornbeam	*Carpinus betulus*	4		100, 100, 200, 200	Radius: 3.8m. Area: 45 sq m.	2	2	2	2	Young		B2
T090	Hornbeam	*Carpinus betulus*	1	230		Radius: 2.8m. Area: 25 sq m.	2	2	2		Young		B2

Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T091	Hornbeam	*Carpinus betulus*	2		100, 140	Radius: 2.1m. Area: 14 sq m.	2	2	2	2	Young	Tree has grown around guard strap	B2
T092	Hornbeam	*Carpinus betulus*	3		200, 110, 110	Radius: 3.0m. Area: 28 sq m.	2		2	2	Young	Grown around guard strap	B2
T093	Hornbeam	*Carpinus betulus*	2		250, 100	Radius: 3.2m. Area: 32 sq m.	2	2	2	2	Young		B2
T094	Hornbeam	*Carpinus betulus*	1	220		Radius: 2.6m. Area: 21 sq m.	2	2	2	2	Young		B2
T095	Hornbeam	*Carpinus betulus*	2		300, 200	Radius: 4.3m. Area: 58 sq m.	3	3	3	3	Early Mature		B2
T096	Not identified	*Not identified*	1	250		Radius: 3.0m. Area: 28 sq m.	3		3	3	Early Mature		B2
T097	Sycamore	*Acer pseudoplatanus*	1	150		None - due to Retention Category of U.	1	1	1	1	Young	Growing through fence and in poor condition overall	U
T098	London Plane	*Platanus x hispanica*	5		300, 130, 390, 330, 200	Radius: 7.7m. Area: 186 sq m.	1	4	6	2	Mature		B2
T099	London Plane	*Platanus x hispanica*	1	800		Radius: 9.6m. Area: 290 sq m.	4	4	4	4	Mature		A2
T100	London Plane	*Platanus x hispanica*	1	900		Radius: 10.8m. Area: 366 sq m.	4	4	4	4	Mature		A2
T101	London Plane	*Platanus x hispanica*	1	800		Radius: 9.6m. Area: 290 sq m.	4	4	4	4	Mature		A2
T102	London Plane	*Platanus x hispanica*	1	850		Radius: 10.2m. Area: 327 sq m.	5	5	5	5	Mature		A2
T103	London Plane	*Platanus x hispanica*	1	650		Radius: 7.8m. Area: 191 sq m.	5	5	5	5	Mature		A2
T104	Sycamore	*Acer pseudoplatanus*	2		240, 110	Radius: 3.2m. Area: 32 sq m.	2	2	2	2	Mature		B2
T105	Sycamore	*Acer pseudoplatanus*	1			Radius: 3.6m. Area: 41 sq m.	2	2	2	2	Mature		B2

Ref	Common Name	*Botanical Name*	Num. Stems	Stem Diam (mm)	Multiple Stem diam (mm)	RPA	North	South	East	West	Life Stage	General Observations	Retention Category
T106	Sycamore	*Acer pseudoplatanus*	2		200, 300	Radius: 4.3m. Area: 58 sq m.	3	3	3	3	Mature	Est DBH as off-site on NR land. Dense ivy obscuring potential bat features. Could not be surveyed closely due to off-site and on NR Land	B2
T107	Sycamore	*Acer pseudoplatanus*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2
T108	Sycamore	*Acer pseudoplatanus*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2
T109	Sycamore	*Acer pseudoplatanus*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2
T110	Common Ash	*Fraxinus excelsior*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2
T111	Ash	*Fraxinus sp.*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2
T112	Common Ash	*Fraxinus excelsior*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2
T113	Sycamore	*Acer pseudoplatanus*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2
T114	Sycamore	*Acer pseudoplatanus*	1								Young	Off-site tree along Site boundary on NR land - data could not be obtained	B2

Appendix B Tree Constraints Plan



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Key:

- Category A
- Category B
- Category C
- Category U

T = Single Tree
G = Group of Trees

Red Line Boundary

REV	DESCRIPTION	DRN	DES	CHK	APP	DATE
P01	For Information	ES	CG	JG	MH	13.04.21

Pell Frischmann
PENINSULA PARK RYDON LANE EXETER EX2 7NT
Tel: +44(0) 1392 444345 Fax: +44(0) 1392 444880
Email: pfexeter@pellfrischmann.com
www.pellfrischmann.com

P.F. Project Nr: 104878

Architect/Client/Contractor

Client Project Nr: CLIENT_PROJECT_NO

Client Project Title: CLIENT_PROJECT_TITLE

Project

FINCHLEY ROAD

Drawing Title

Tree Constraints Plan
Sheet 1 of 2

	Name	Date
Drawn	ES	13.04.21
Designed	CG	13.04.21
Checked	JG	13.04.21
Approved	MH	13.04.21

Scale 1:500 | Size A1

File No. New Tree Data.dwg

Drawing Status For Information

Drawing No. 104878-PEF-ZZ-XX-DR-GE-400003

Revision P01

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REV	DESCRIPTION	DRN	DES	CHK	APP	DATE
P01	For Information	ES	CG	JG	MH	13.04.21

Pell Frischmann
PENINSULA PARK RYDON LANE EXETER EX2 7NT
Tel: +44(0) 1392 444345 Fax: +44(0) 1392 444880
Email: pfexeter@pellfrischmann.com
www.pellfrischmann.com

P.F. Project Nr: 104878

Architect/Client/Contractor

Client Project Nr: CLIENT_PROJECT_NO

Client Project Title: CLIENT_PROJECT_TITLE

Project

FINCHLEY ROAD

Drawing Title

Tree Constraints Plan
Sheet 2 of 2

	Name	Date
Drawn	ES	13.04.21
Designed	CG	13.04.21
Checked	JG	13.04.21
Approved	MH	13.04.21

Scale 1:500 | Size A1

File No. New Tree Data.dwg

Drawing Status For Information

Drawing No. 104878-PEF-ZZ-XX-DR-GE-400004

Revision P01

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