Bellway Homes Limited (Thames Valley)

aspect arboriculture

Former Dee Road Fire Station,
Reading

Arboricultural Impact Assessment

December 2022
11394_AIA.001 Rev B

Project Details	
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Executive Summary

i) **Introduction:** Aspect Arboriculture are commissioned by Bellway Homes Limited (Thames Valley) to prepare an Arboricultural Survey and Impact Assessment relating to the proposed redevelopment of the former Dee Road Fire Station, Reading.

ii) **Proposals:** The proposals seek planning permission for the '*Redevelopment of former fire station to provide 63 dwellings, including affordable housing, together with associated access, parking and landscaping*'.

iii) **Surveys:** The site was surveyed by Aspect in July 2022 following the guidance contained within BS5837:2012. Copies of the tree survey information are available within appendices A and B.

iv) **Statutory Designations:** Background checks have confirmed that the site does not occur within a Conservation Area and that there are no trees present on site which are afforded protection by a Tree Preservation Order.

v) **Arboricultural Impact:** The arboricultural impact of the proposed redevelopment is described by net tree losses, totalling one Ash, one Elder and one Buddleia of individual distinction, a linear group of predominantly Leyland Cypress and two groups of ornamental plantings, all of low quality. A preliminary tree protection drawing is appended to this document to demonstrate the deliverability of safeguarding measures. Conclusions drawn against Reading Borough Council's development control policies and the Framework, conclude that the development proposal is acceptable from the arboricultural perspective.

1 Introduction

1.1 Background & Proposals

1.1.1 Aspect Arboriculture are commissioned by Bellway Homes Limited (Thames Valley) to prepare an Arboricultural Survey and Impact Assessment relating to the proposed redevelopment of the former Dee Road Fire Station, Reading.

1.1.2 The proposals seek planning permission for the '*Redevelopment of former fire station to provide 63 dwellings, including affordable housing, together with associated access, parking and landscaping*'.

1.2 Site Overview

1.2.1 The application area falls within the administrative control of Reading Borough Council and comprises the curtilage the former Dee Road Fire Station. The site is approximately rectangular in shape and abuts adjacent existing residential development to the west. The northern, eastern and southern boundaries are defined by Leven Street, Spey Road and Former Dee Road, respectively.

1.3 Existing Tree Stock

1.3.1 There are eleven trees of individual distinction and five groups of trees recorded within the tree survey. They have all been considered in full during the design stages of the project in accordance with BS5837:2012.

1.3.2 The site's principal tree comprises an offsite early mature Ash (refer to T1 within appendix B). The Ash is a moderate example of its species whilst lacking the special quality necessary for a higher categorisation, though it is prominent within views from Leven Street. Accordingly, it makes a positive contribution to the appearance and amenity of the site, commensurate to BS5837:2012 category B.

1.3.3 The remaining trees and groups are located around the site's boundaries, either offsite or abutting the boundary fences or as ornamental plantings adjacent to existing buildings, forming the Fire Stations current landscape provision.

1.3.4 Trees of individual distinction comprise Apple, Cherry and Ash located offsite within neighbouring third party land, and further Ash, Cherry, Elder, Lawson Cypress and Buddleia abutting the site's boundaries. Additionally, there are assemblages of Hazel, Purple Plum, Elder, Ash, Lawson Cypress, Leyland Cypress, Goat Willow, Damson, Cherry Laurel, Dogwood and an assortment of ornamental plantings (refer to T2-T9 and G1-G5 within appendix B).

1.3.5 All trees and groups typically represent unremarkable examples of their type and are of low arboricultural value, warranting BS5837:2012 Category C only.

2 Statutory Designations

2.1 Conservation Area

2.1.1 Background checks have confirmed that the site does not occur within a Conservation Area (Reading Borough Council, cited August 2022). Accordingly, the amenity value of the trees is not elevated to preserving or enhancing any unique or distinctive interest linked to the setting.

2.2 Tree Preservation Orders

2.2.1 Background checks have also confirmed that there are no trees within influence of the site that are afforded protection by a Tree Preservation Order (Reading Borough Council, cited August 2022).

3 Policy Review

3.1 The National Planning Policy Framework

3.1.1 The NPPF (2021) provides planning policy guidance at a National level. Paragraph 131 of the Framework details the aspiration to secure increased tree cover within new developments, comprising both new tree planting, and the retention of existing trees where possible: *'Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible.'*

3.1.2 Building upon paragraph 131, the Framework also considers that 'decisions should contribute to and enhance the natural and local environment by: 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' (para 174b).

3.1.3 In respect of Veteran Trees and Ancient Woodland, paragraph 180c requires that development proposals award particular consideration to these important features; *'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'.*

3.1.4 For clarity, there are no veteran or ancient trees, or any designated areas of ancient woodland within influence of the site, against which the tests of para. 180c can be applied.

3.1.5 In addition, paragraph 180d also emphasises the benefit that can be secured through the provision of public access to, and resultant appreciation of, retained tree cover, stating: *'…opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can… enhance public access to nature where this is appropriate.'*

3.2 Reading Borough Council

3.2.1 At a local level, Reading Borough Council has a statutory obligation to ensure adequate provision is made for the preservation of trees through Section 197 of the Town and Country Planning Act (1990). The Reading Borough Local Plan (adopted November 2019) is understood to comprise the Council's primary development control document; within which, Policy EN14 is understood to be the Council's principal test relevant to trees in the context of development (relevant parts reproduced below).

3.2.2 **Policy EN14**: Trees Hedges and Woodlands

'Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal where they are of importance, and Reading's vegetation cover will be extended. The quality of waterside vegetation will be maintained or enhanced.

New development shall make provision for tree retention and planting within the application site, particularly on the street frontage, or off-site in appropriate situations, to improve the level of tree coverage within the Borough, to maintain and enhance the character and appearance of the area in which a site is located, to provide for biodiversity and to contribute to measures to reduce carbon and adapt to climate change. Measures must be in place to ensure that these trees are adequately maintained.'

4 Arboricultural Impact

4.1 Net Tree Removals[1]

4.1.1 Trees are recommended for removal where: a) it is necessary and unavoidable to site development within proximity to existing trees, such that they cannot be confidently retained in the long-term as living features, and/or b), where the amenity value of the tree will be significantly reduced as a result of the proposals, particularly if already of a low retention priority.

4.1.2 Tree removals necessary to implement the proposed redevelopment are shown at Table 1 overleaf and are limited to one Ash, one Elder and one Buddleia of individual distinction, a linear group of predominantly Leyland Cypress and two groups of ornamental plantings. All are unremarkable trees and groups set within the interior, of low arboricultural quality and provide a limited contribution to the amenity of the site.

[1]All tree works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

4.1.3 **Table 1:** Net Tree Removals by BS5837 Category.

Category A	Category B	Category C
None	None	**T5** Ash **T6** Elder **T11** Buddleia **G3+** **G4+** **G5+**

+ Denotes assemblage of three or more species (refer to appendix B)

4.1.4 There will be a requirement to replant to mitigate for their loss, although this can be readily achieved through the introduction of new planting of species of a more suitable scale and assemblage. This has been recognised during design; accordingly, areas of soft landscape are provided throughout the site that will be capable of receiving meaningful new planting.

4.2 Vulnerable Trees

4.2.1 The proposals will require work within the root protection area of a retained offsite Ash (T1). Solutions have subsequently been developed to mitigate the effect on root systems where works within RPAs are unavoidable. Through a considered design process and arboricultural appraisal of a preliminary layout, the use of a retaining structure within the RPA of T1 was prevented. The culmination of the design process now amounts to the removal of the hard surface within the grounds of the fire station, providing betterment through its conversion to soft landscape. The design proposes a gradual 300mm reduction in levels by way of a bank falling away from the boundary, and its implementation is described below.

<u>Hard Surface Converted to Soft Landscape</u>

4.2.2 The removal of hard surfacing from within the RPA of the retained Ash will need to be undertaken sensitively (refer to Figure 1 overleaf). The extent and type of hard surface reconfiguration is illustrated within the Tree Protection Plan provided within appendix C.

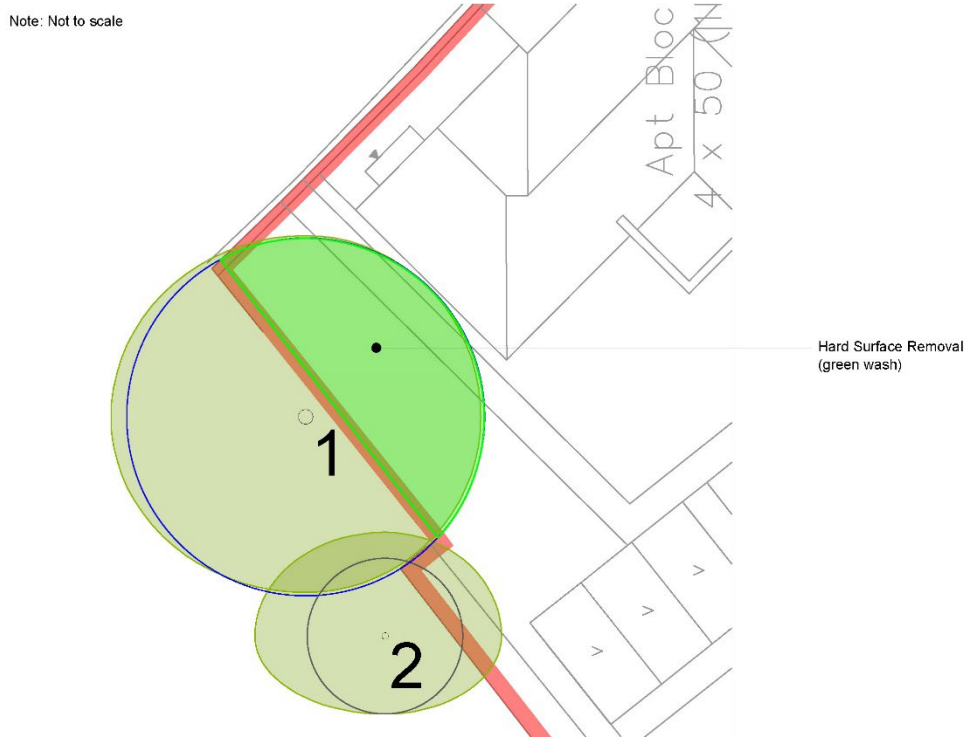
4.2.3 Where the wearing course is to be removed and replaced, the existing surface must be lifted and broken out manually (where possible) or lifted carefully by a lightweight machine with an adequate reach. The machine must operate from outside of the RPA or from the footprint of existing hard surfaces, under arboricultural supervision.

4.2.4 The existing sub-base should be left undisturbed and in-situ, then capped with screened topsoil. This approach will minimise ground disturbance and the potential for harm to occur to the retained trees' rooting environment. The extent and type of encroachment is illustrated with a green wash within the Tree Protection Plan provided within appendix C.

4.2.5 Should roots be discovered, the use of an excavator must cease, and hand operated tools and power tools adopted to avoid damage. Any exposed rooting material must be covered with loosely bound topsoil and/or bark mulch to prevent drying out, prior to the installation of the replacement wearing course/final landscaping.

4.2.6 The removal of hard surfacing will improve the outlook of the Ash substantially by enabling the conversion of a not insignificant area of hard surface to soft landscape and will benefit from a net gain of c.39% soft landscape within its RPA.

4.2.7 **Figure 1.** Hard Surface Converted to Soft Landscape within T1's RPA.

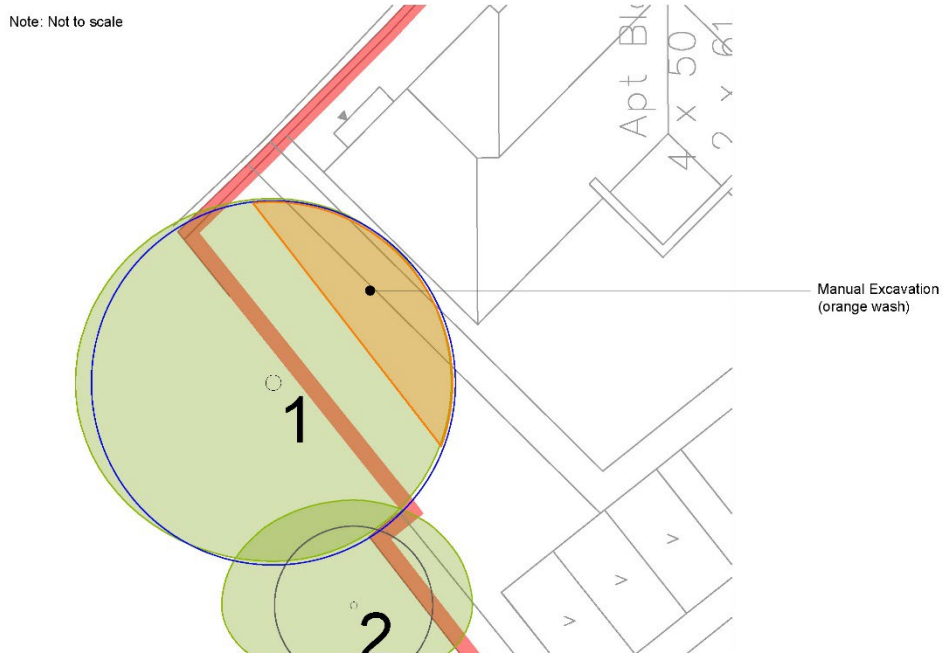


Supervised Excavation

4.2.8 As part of the above works, the gradual reduction of ground levels will incur shallow excavation within the eastern periphery of T1's RPA. This will have minimal effect owing to the limited extent of excavation; most of the fall is achieved through the removal of hard standing and any excavation is sited where roots are predicted to be low diameter and their natural turnover is highest (refer to Figure 2 overleaf).

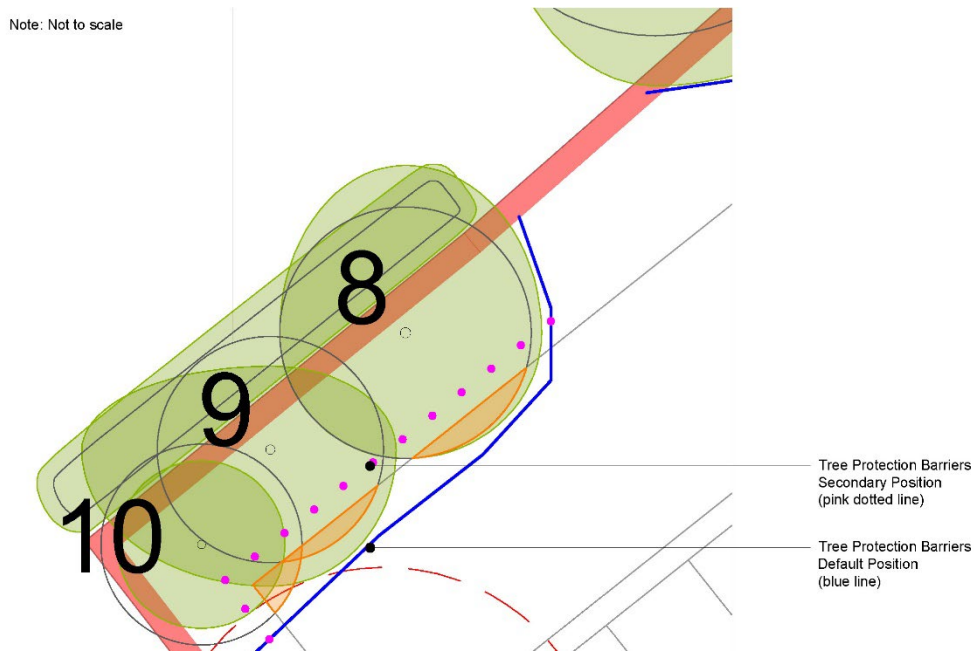
4.2.9 However, as a precautionary approach, it is recommended that excavation work to accommodate the grading of the ground within the RPA adopts the principles of BS5837 concerning manual excavation techniques and root pruning (Clause 7.2). Therefore, it will be readily achievable to undertake the excavations without concern for the future health or vitality of the Ash.

4.2.10 **Figure 2.** Supervised Excavation within T1's RPA.



4.2.11 Additional works to accommodate a road to provide access for plots 24 and 25 will incur excavation within the periphery of T8, T9 and T10's RPA (refer to Figure 3 below). The excavation works for the road will also be minor, amounting to c.4.2%, c.3.9% and c.4.4% respectively. Occurring on the edge of the trees' RPAs where roots are predicted to be low diameter and their natural turnover is anticipated to be highest the effect will be particularly minor. Adopting the principles of BS5837 concerning manual excavation techniques and root pruning (with the added precaution of arboricultural auditing), it will be possible to undertake the excavations to occur without undue concerns for the future health or vitality of the two Cherries and the Lawson Cypress (T8-T10).

4.2.12 **Figure 3.** Supervised Excavation within T8, T9 and T10's RPA.



Demolition

4.2.13 The demolition of the extant built form is not expected to cause harm to any retained trees. The most significant of the existing buildings is located adjacent to the western boundary and retained trees T7-T10. Therefore, external walls and footings must be pulled away from the boundaries and any machinery only be operated from the footprint of existing hard surfaces.

4.3 Pruning Works[2]

4.3.1 To accommodate the construction of the western elevation of the proposed apartment block, plots 53-63, it is recommended that a 2m standoff from the canopy is allowed to facilitate construction room, including the erection of scaffolding. Therefore, it will be necessary to reduce the northeastern canopy extent of T1 by up to c.1m.

4.3.2 Although not required to facilitate construction, it is recommended that dead branches are also removed from the canopies of retained trees. This will help mitigate the risk of future tree related hazards emerging and associated apprehension.

4.3.3 Pruning works should be undertaken in accordance with section 7.3 (for removal of deadwood) and section 7.7 (for crown reduction and reshaping) of BS3998:2010, by a competent tree contractor. This is essential to ensure that cuts are performed correctly and positioned to avoid future structural defects or physiological issues, facilitate growth and maintain aesthetic value.

4.4 Protective Barriers

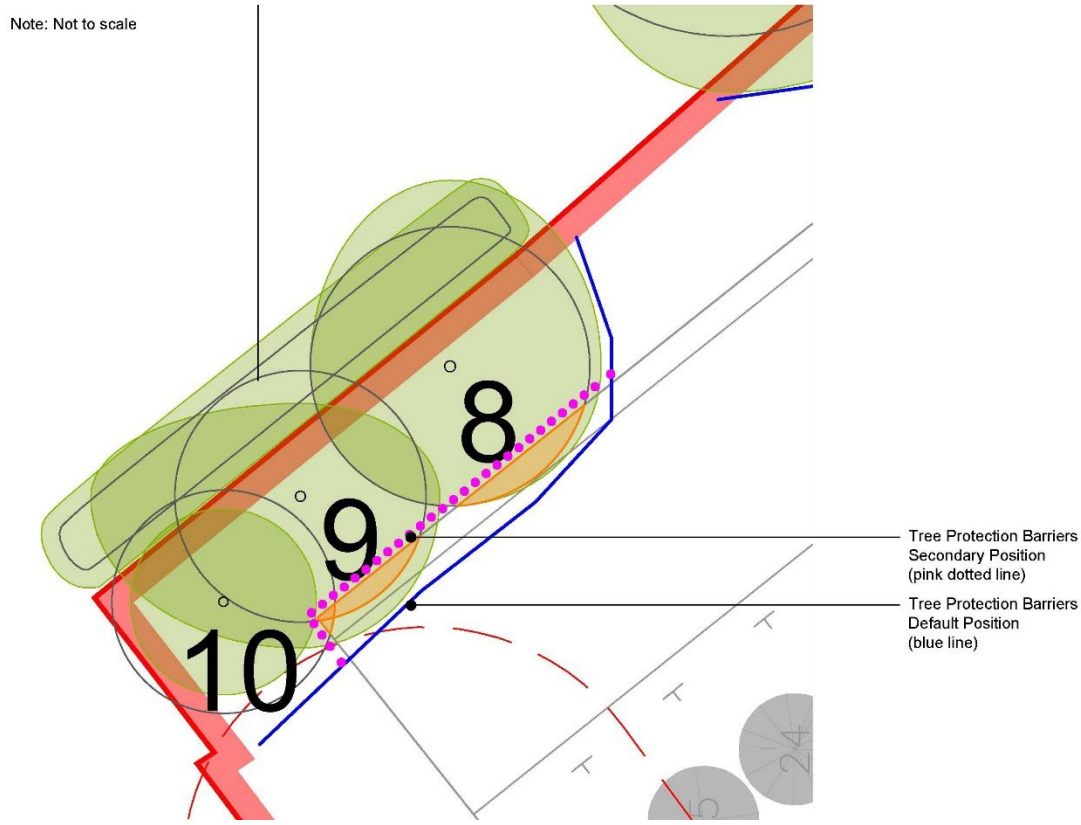
4.4.1 It will be important to protect retained trees' above-ground structures and underlying RPAs from damage during construction.

4.4.2 To achieve this, tree protection barriers will be erected prior to the commencement of any works and consist of the barrier specification illustrated within the Tree Protection Plan at appendix C. The locations where protective fencing will be erected are illustrated within the Tree Protection Plan (Appendix C) with a bold blue line (refer to Figure 4 overleaf).

4.4.3 Tree protection barriers will need to be relocated to a secondary position after the removal, and prior to the manual excavation within T8-T10's RPAs. Where this is will be necessary secondary positions are illustrated within the Tree Protection Plan (Appendix C) with a dotted pink line. The existing rear garden boundary fencing for the adjacent residential dwelling is sufficient to protect the stem of T1 during the removal of hard surfaces with T1's RPA.

[2] All tree works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

4.4.4 **Figure 4.** Protective Barriers.



4.5 Mitigation Replanting

4.5.1 The principle of tree removal generates a requirement for replacement planting. This has been recognised during design and the layout provides opportunities to incorporate replacement planting. Accordingly, the layout has been designed to provide opportunities for incorporating new and replacement tree planting throughout the site. Under separate instruction, Aspect Landscape Planning have prepared a Landscape Masterplan which illustrates the proposed approach to realising meaningful landscape provision within the application area (drawing ref. 7881.ASP4.LSP_A).

4.5.2 The strategy includes the introduction of a significant number of new, individually distinguishable replacement trees within areas of soft landscaping throughout which will have a greater capacity to contribute to the amenity of the site.

4.5.3 Within the development itself, publicly appreciable planting space is unavoidably more constrained. In this situation, the proposed planting in these areas comprises ornamental scale trees and hedges appropriate for the setting and can serve to soften the development whilst providing seasonal interest.

4.5.4 Overall, as a result of the limited and low quality removals required, the introduction of the development provides an opportunity to secure an uplift in the quality and distribution of tree cover.

5 Conclusions

5.1.1 Pursuant to Reading Borough Council's Policy requirements, the proposals have been informed by a survey of the existing tree stock using the guidance provided at BS5837:2012.

5.1.2 There is an unavoidable requirement to incur tree removal as part of the redevelopment proposal. This effect can be quantified as the removal of one Ash, one Elder and one Buddleia of individual distinction, a linear group of predominantly Leyland Cypress and two groups of ornamental plantings, all of low quality. It will be possible to mitigate for these losses through the provision of replacement trees, without any negative effects on the site's amenity, in accordance with policy EN14.

5.1.3 An effective scheme for safeguarding retained trees has been prepared which relies on the use of recognised construction methodologies; this is reinforced by precautionary reliance on arboricultural auditing where construction is proposed within influence of retained trees.

5.1.4 To inform the planning balance, it is our concluding view that the proposals can be supported from the arboricultural perspective and do not conflict with the Framework or Reading Borough Council's Policy EN14. This opinion is subject to the provision of mitigative replanting commensurate to the role and canopy coverage of the trees that are to be removed and the adoption of safeguards for protecting retained trees during construction.

6 Recommendations

6.1.1 A detailed Arboricultural Method Statement supported by 1:500 scale technical drawings should be prepared which expand on Appendix C. This could be secured by Condition. Details of proposed levels and service routes should be included; a scheme for auditing tree protection and subsequent reporting to the Council should feature explicitly throughout.

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APPENDICES

APPENDIX A

TREE CONSTRAINTS PLAN (11394 TCP 01)

1:500 @ A3

0m 5m 10m 20m

KEY:

- Site Boundary
- 15 Tree Numbers
- Tree Canopies
- Category 'B' RPA
- Category 'C' RPA
- Shading Arc

Note: Trees 2-4, 6, 7 and group G12 have been plotted using measurements onsite in conjunction with aerial imagery. Their locations were not recorded on the topographical survey of the site (drawing ref: 15879-1.dwg).

Note: The RPA footprint for group G3 has been displaced to allow for the effect of the existing building foundations. The surface area of the RPA has not been reduced.

Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd

REVISIONS

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TITLE

Former Dee Road Fire Station, Reading
Tree Constraints Plan

CLIENT

Bellway Homes Limited (Thames Valley)

SCALE	DATE	DRAWN
1:500 @ A3	JUL 2022	JH

DRAWING NUMBER	REVISION
11394 TCP 01	

Based on: 15879-1.dwg

APPENDIX B

TREE SURVEY SCHEDULE (11394 TS 01)

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BS 5837:2012 Tree Schedule: Former Dee Road Fire Station, Reading

11394 TS 01

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BS5837:2012 Tree Survey: Explanation of Survey Criteria

*Area around tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of roots and soil structure is a priority. *The RPA has been manipulated to allow for various site features, i.e. roads, structures or changes in levels. Please refer to the Tree Constraints Plan for these changes.*

e.g.: young, semi-mature, early-mature, mature or over-mature

Sequential reference number cited on all aspect drawing.

Height and Crown spread measured to the nearest half meter; # denotes where this is estimated.

Category prefix A-C denotes arboricultural quality, decreasing from A (high) to C (low); Subcategories 1, 2 and 3 highlight associated arboricultural (1), landscape (2) and ecological (3) qualities.

Category U trees are those in such a condition that they cannot be realistically retained as living trees in the current context for the long term.

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	radial							

Measured to the nearest 10mm; # denotes estimated diameter where access is not possible.

e.g.: above-average, average, below average or dead

General observations, i.e. defects, preliminary management recommendation, presence of pests/disease, perceived significance.

Height of first significant branch and/or canopy

e.g.: good, indifferent, poor, or hazardous

Colour band key:

Category A
Category B
Category C
Category U

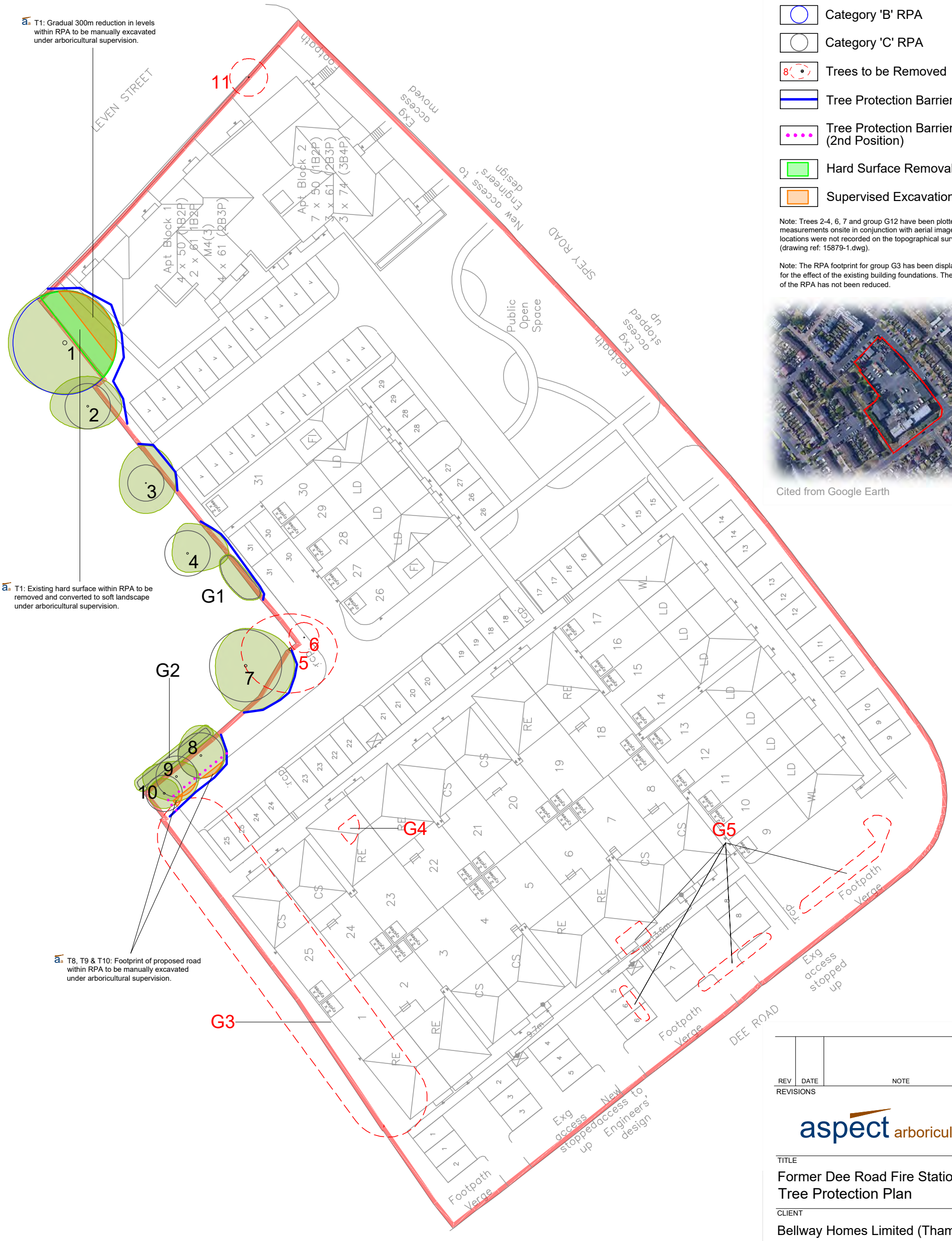
The following survey should not be interpreted as a report on tree health and safety. Aspect's opinion of tree condition and structural potential is valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees existing setting.

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
1	Ash	570#	16.5	7	6.75	6.75	7.5#		3.5	2	Early Mature	Average	Indifferent	Offsite and inaccessible, situated within third party domestic land Balanced radial canopy Average internal deadwood Forks at c.2.75m, union appears sound Habitat box attached to the western aspect of trunk at c.2.75m Prominent within views from the public highway to the north Moderate example of the species whilst maturing	B12	6.9
2	Apple	250#	6	4#	4.5#	3#	5#		1.5#	0.5	Early Mature	Average	Indifferent	Offsite and inaccessible, situated within third party domestic land Unremarkable example of the species	C12	3
3	Cherry	190#	8	5#	4#	4#	3.5#		2.5#	2.5#	Semi Mature	Below Average	Indifferent	Offsite and inaccessible, situated within third party domestic land Sparse canopy at time of the survey Unremarkable example of the species	C12	2.4
4	Ash	250#	12	4#	5.5#	2.5#	2#		5#	5#	Semi Mature	Average	Indifferent	Offsite and inaccessible, situated within third party domestic land Etiolated form Unremarkable example of the species	C1	3
5	Ash	310 oi	12	4.75	6.25	5.75	6.5#		6	5	Early Mature	Below Average	Indifferent	Trunk clad and obscured by Ivy, unable to thoroughly inspect Trunk kinks to east from ground level, corrects at c.0.75m Slightly sparse canopy at time of the survey Unremarkable example of the species	C1	3.6
6	Elder	110#	5.5					2	2.75	3	Semi Mature	Average	Poor	Offsite and inaccessible, situated within third party land Trunk growing flush with and partially enveloping boundary fence Low arboricultural quality	C12	1.2
7	Ash	390#	12.5	5#	6.5	6	4#		5.5	5	Early Mature	Below Average	Indifferent	Offsite and inaccessible, situated within third party domestic land Sparse upper canopy at time of the survey Unsympathetic lower limb removals from the lower crown to crown lift up to c.5m Unremarkable example of the species	C1	4.8
8	Cherry	195 2* 100 oi	6	4#	3.25	3	3#		1.25	2.5	Semi Mature	Below Average	Indifferent	Stems clad and obscured by Ivy, unable to thoroughly inspect Slightly sparse canopy at time of the survey Unremarkable example of the species	C12	3
9	Cherry	130 120 100 70 oi	5.5	2#	3	3.25	4.5#		1.25	1	Semi Mature	Below Average	Indifferent	Stems clad and obscured by Ivy, unable to thoroughly inspect Slightly sparse canopy at time of the survey Unremarkable example of the species	C12	2.7

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m) N	E	S	W	Radial	First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
10	Lawson Cypress	160 110 70 #	5.5					2	0.5	0.5	Semi Mature	Average	Indifferent	Stems inaccessible for measurement due to dense lower crown Low arboricultural value, readily replaceable at current size	C12	2.4
11	Buddleia	80 2* 70	5					2.5	0.5	0.25	Semi Mature	Average	Indifferent	Self set specimen situated within tarmac area Low arboricultural quality	C12	1.5
G1	Hazel Purple Plum	4* 150#	6.5 av					3.75 av	1 av #	1 av #	Semi Mature	Average	Indifferent	Offsite and inaccessible, situated within third party domestic land Unremarkable collection	C12	3.6
G2	Elder Ash Lawson Cypress	140 120 av #	6.5 av					2.5 av	2 av	1.75 to the south	Young to Semi Mature	Average	Indifferent	Offsite and inaccessible, situated within third party domestic land Unremarkable collection	C12	2.1
G3	Leyland Cypress Ash Elder	520 220 av	11 av					5.25 av	0.5 to 1 to the east	0.5 to 1 to the east	Semi Mature to Mature	Average	Indifferent	Cohesive linear belt situated adjacent to western boundary Provides partial screen of adjacent dwellings Predominantly clad and obscured by Ivy, unable to thoroughly inspect Previously reduced to c.6.5m height Self set Elder and Ash understory Unremarkable collection	C12	6.9*
G4	Goat Willow Ash Damson Cherry Laurel Dogwood	75 av	1.5 to 4.5					1 av	0.5 av	0.5 av	Semi Mature	Average	Indifferent	Collection of self set specimens and ornamental plantings Low arboricultural value, readily replaceable at current size	C12	0.9
G5	Cherry Laurel Smoke Bush Cotoneaster Dogwood Mahonia Caster oil plant Berberis	75 av	1 to 4.5					1.25 av	0.25 av	0.25 av	Semi Mature	Average	Indifferent	Multiple parcels of maintained ornamental plantings Low arboricultural value, readily replaceable at current size	C12	0.9

APPENDIX C

TREE PROTECTION PLAN (11394 TPP 01 Rev A)



1:500 @ A3

0m 5m 10m 20m

KEY:

- Site Boundary
- 15 Tree Numbers
- Tree Canopies
- Category 'B' RPA
- Category 'C' RPA
- 8 Trees to be Removed
- Tree Protection Barrier
- Tree Protection Barrier (2nd Position)
- Hard Surface Removal
- Supervised Excavation

Note: Trees 2-4, 6, 7 and group G12 have been plotted using measurements onsite in conjunction with aerial imagery. Their locations were not recorded on the topographical survey of the site (drawing ref: 15879-1.dwg).

Note: The RPA footprint for group G3 has been displaced to allow for the effect of the existing building foundations. The surface area of the RPA has not been reduced.

Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd

REVISIONS

aspect arboriculture

TITLE

Former Dee Road Fire Station, Reading
Tree Protection Plan

CLIENT

Bellway Homes Limited (Thames Valley)

SCALE	DATE	DRAWN
1:500 @ A3	DEC 2022	JH / TR

DRAWING NUMBER	REVISION
11394 TPP 01 Rev A	A

Based on: 092102-BEL-TV-01-22.12.22.dwg

APPENDIX D

TREE SURVEY METHODOLOGY

Tree Survey Methodology

The tree survey is a form of Visual Tree Assessment undertaken during July 2022. Tree locations are identified via a topographical survey; locations of any trees excluded from the topographical survey were plotted on site. The purpose of the survey is to record information about trees on or adjacent to the site to inform design options. In keeping with clause 4.4 of BS5837: 2012 'Trees in Relation to Design, Construction and Demolition', the survey provides a record of the following parameters:

Tree Numbers: all individual trees are sequentially numbered. Groups of trees, woodlands and hedgerow are also sequentially numbered with a corresponding prefix relevant to their type e.g. G, W or H respectively; the identification of trees as woodland, groups of trees or within hedgerows is undertaken where appropriate. The identification of trees as individuals within collections has been made where it is considered sensible to make such a differentiation.

Species: listed by common name

Stem Diameter: given in millimetres and obtained by measuring single/multiple stems at 1.5m using a diameter tape in accordance with Annex C within BS5837:2012. Diameters of inaccessible trunks are estimated and provided with the suffix '#'.

Tree Heights: determined using a clinometer and measured to the nearest 500mm. Heights are estimated where specific triangulation is not achievable and by reference to measured trees nearby (provided with the suffix '#').

Crown Spreads: measured at cardinal points using a Leica Disto™ laser distance measurer. Measurements were recorded to the nearest 250mm. Inaccessible crown spreads are estimated based on measured canopies nearby and provided with the suffix '#'

Crown Clearance: The height of the first significant living branch and/or canopy (as appropriate) is recorded using a Leica Disto™ laser distance measurer to inform vertical ground clearance. Crown clearance may be higher or lower than the first significant branch. Estimated clearances are provided with the suffix '#'. Height of first significant branch will be provided where considered advantageous to make the distinction.

Life Stage – The age of trees, groups of trees, hedges and woodlands are defined as follows:

- Young (within the first 1/4th of life expectancy)
- Semi-mature (within the second 1/4th of life expectancy)
- Early Mature (within the third 1/4th of life expectancy)
- Mature (within the fourth 1/4th of life expectancy)
- Over Mature and Veteran (exceeding normal life expectancy)
- Veteran (significantly exceeding normal life expectancy)

Physiological and structural condition: physiological condition defined as follows; good, above average, average, below average, poor or dead. Structural condition is defined as: good, moderate, indifferent, poor or hazardous

Comments: further observations were recorded where necessary i.e. details regarding defects, preliminary management recommendations, presence of pest/disease and perceived significance.

BS5837 Category: pursuant to BS5837:2012 section 4.5 and cascade chart for tree quality assessment (refer to reproduced Table 1 overleaf). Trees qualifying under a given category (A-C and U) and any appropriate subheading (1-3) are considered to fall within the scope of that category's definition.

Estimated Remaining Contribution. Described` as a guideline only and in terms of years: <10, 10+, 20+ and 40+ relevant to category U, C, B and A respectively. This information is not provided on the tree schedule to avoid conclusions based upon 'life expectancy'.

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U 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	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*		
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**
Trees to be considered for retention			
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

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