

Arboricultural Impact Assessment Report

And tree protection strategy

for proposed replacement dwelling at

8 Kelmscott Close, Caversham,
Reading RG4 7DG

On Behalf of: **Hadi Moallemi**

Reference: AC/BCT-1/440.AIA

Revised: **05 Jun 2024**

BC Trees Limited – Arboricultural & Woodland Consultancy

Executive summary

This report has been drafted to provide the information required to enable the local planning authority to meet the duty placed upon them by s.197 of the Town and Country Planning Act (1990).

Included, to support the proposal for one new dwelling at 8 Kelmscott Close, are:

- *A BS5837:2012 compliant tree survey*
- *An arboricultural impact assessment*
- *A tree protection strategy including a method statement and protection plan.*

There is no requirement for any tree to be removed to facilitate the proposals. There are no protected trees to be retained.

There are a few dead, weak, misshapen, and over mature trees that have been omitted from this survey.

All spoil removal is to occur from areas outside the RPAs of retained trees and their construction exclusion zones.

The new dwelling is sited outside the existing building (to be demolished) footprint and area of currently undisturbed ground.

Provided the tree protection strategy is implemented as outlined in the method statement, this application is of minimal arboricultural impact, and thus acceptable.

Correct adherence to the tree protection strategy proposed within this report is critical for ensuring the tree is successfully protected through the construction process.

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1. Instructions and terms of reference

1.1. In October 2023, I was instructed by the applicant to review a supplied tree surveyand to assess the likely impact on trees and vegetation and to produce this report in support of a planning application for construction of a new dwelling at 8 Kelmscott Close within the administrative boundary of Reading Borough Council.

1.2. This report has been prepared by Alan Cleverdon of BC Trees Limited, senior arboricultural consultant dealing with trees in relation to all forms of human activity including the built environment.

1.3. Following the recommendations of the British Standard[1], this report includes the necessary information to enable the local planning authority to meet the duty placed upon them by s.197 of the Town and Country Planning Act (1990).

1.4. It demonstrates that the impact, both direct and indirect, of the proposal, has been assessed and where appropriate, migration, compensation and tree protection proposed.

1.5. Correct implementation of the tree protection specified within this report is critical for ensuring the retained trees are successfully protected throughout the construction process.

1.6. Documents supplied to assist this assessment included:

- *Tree Survey (Appendix II)*
- *Topological Survey: 2847-EX-01/440/01.pdf (Appendix III)*
- *Proposed Site Plan: 3648/305 Rev A – PROPOSED SITE PLAN.pdf (Appendix IV)*

1.7. The assessment considers the impact of the proposal on the constraint presented by trees retained within the site and those on adjacent properties. Such impact can be caused directly though construction damage and indirectly from post development resentment and pressure to detrimentally prune or remove the trees. The latter is often due to a poor association between the proposal and the trees.

1.8. The root protection area (RPA) for each tree represents a minimum area in m² that should be less undisturbed around each retained tree. This is initially represented by a circle but is fundamentally an area of rooting volume. This is often adjusted to account for constraints to root growth within the site. Recommendations are provided in the British Standard as to the protection of existing trees during the construction process. This is achieved by ensuring a tree protection strategy is implemented before any demolition or construction on site.

[1]BS5837:2012 Trees in relation to design, demolition and construction

2. Site description

2.1. The application property is situated at the southern end of Kelmscott Close, to the north of warren Escarpment in a suburban residential area of Caversham, Reading.

2.2. The site is situated within an area of residential development at the end of a cul-de-sac.



Aerial view of site outlined approximately in red

2.3. The site is a long wedge shape plot of approximately 75m in length, extends to an area of approximately 0.2 of hectare, consists of a three bedroom dwelling (to be demolished) and one double detached garage (to remain) situated at the northern boundary of the plot.

2.4. There is a public footpath immediately to the south and east of boundaries. The footpath has a sylvan character with many overgrown trees and hedges. It provide a visual screen between no. 7 and the application site. Other dwellings within the street are primarily two-storey detached properties with hipped, pitched roofs. Many have had two-storey sided extensions.

2.5. The site slops down towards the Warren escarpment and is situated behind deepest section of this escarpment.

2.6. The site is centered at Ordnance Survey Grid Reference: SU 704749.

2.7. The site falls by 9m towards the southern lower boundary and it is visually enclosed by existing vegetation along most boundaries. The existing dwelling occupies an angled position on the site and the front elevation faces onto the road. It has a conservatory extension to the side

2.8. The site is enclosed by rear garden fencing, broken hedging and mature trees to the north western and southern boundaries.

2.9. Surrounding the site to the north, west and east, the adjacent land is typical of the suburban setting and dominated by domestic dwellings, hard standing and mature gardens with small, isolated patches of woodland and open green space in the wider area. To the south, the garden lies adjacent to an area of mixed woodland, leading down a chalk escarpment towards the River Thames with open parkland, fields and the town of Reading beyond.



Current site condition

2.10. The rear garden mostly comprise an expanse of poor grassland surrounded by scattered trees, scrub, and garden shrubs. The grassland, which although once forming a lawn, has evidently been left unmanaged in recent years.

2.11. Dominant species within the grassland include Yorkshire Fog (Holcus lanatus), False Oat-grass (Arrhenatherum elatius), Daisy (Bellis perennis), Meadow Buttercup (Ranunculus acris), Spear Thistle (Cirsium vulgare), Wood Avens (Geum urbanum) and Common Nettle (Urtica dioica). The grassland is tussocky in structure with scattered Silver Birch (Betula pendula) and Sycamore (Acer pseudoplatanus) saplings. A few scattered trees are found within the grassland including a semi-mature Silver Birch, an immature multi-stemmed Sycamore, an immature Cypress sp. and an immature Yew (Taxus baccata).

2.12. The northern tip of the site comprises a densely planted area of introduced garden shrubs which overhang to create a ‘tunnel’ over the adjacent area of hard standing.

2.13. The western boundary of the grassland area is comprised of a line of immature trees and

scrub patches including Sycamore, Hazel (Corylus avellana), Holly (Ilex aquifolium) and Ivy (Hedera helix) associated with a low chain link fence. A residential garden and woodland lies beyond the boundary fence. A small patch of Traveller's Joy (Clematis vitalba) growing upon a pile of brash within the grassland. A mature Sycamore tree, approximately 14m high and covered with dense Ivy growth. A fallen dead branch lies on the ground below the tree and some dead wood is noted within the tree canopy.

2.14. An area of trees, dominated by Sycamore, forming the southern end of the site. Ivy is dominant in this part of the site, covering the trees, the adjacent fence line and the ground below. Some patches of Common Nettle are found around the periphery of the area.

2.15. The eastern boundary of the site is formed by a chain link fence, broken in places and bordering an adjacent footpath. A line of garden shrubs and immature to semi-mature Sycamore trees follows the line of the fence, all heavily overgrown with Ivy. Occasional patches of Bramble scrub are found along the eastern boundary of the site.

3. Tree survey- scope and methodology

3.1. Tree survey data was supplied prior to my visit. Draffin Associates Ltd, Landscape Planning Consultants carried out a survey.

3.2. The tree survey has been carried out following the recommendation of The British Standard and the trees are assessed objectively and without reference to any site layout proposals. Categories are based on each tree's health and condition, together with an assessment of its life expectancy if its surroundings were to be unchanged.

3.3. The tree condition survey carried out on July 2023 which is appended to this report (see Appendix III) identifies trees/woodland of significance that should be considered in any development proposal for the site. Stem locations within groups may be estimated, and indicative of canopy only. Mature offsite trees include Beech and Cedar of Lebanon. There was no specimen trees on site.

3.4. The remaining vegetation comprises unmanaged scrubs, neighboring trees and shrubs of limited values.

3.5. The tree survey was carried out from ground level only, with the aid of binoculars as necessary, following the Visual Tree Assessment[2] (VTA) method.

3.6. Where trees are located on neighboring land an estimated appraisal has been made of theirquality and dimensions.

3.7. Where stems or branches are obscured by ivy or other materials a full assessment of those partswill not be possible.

3.8. Tree heights were measured with a clinometer or estimated in relation to those measured.

3.9. Trunk diameters are measured at 1.5m above ground level, where this is not possible, then Figure C.1 of the British Standard is followed.

3.10. Tree canopies, where markedly asymmetrical, were measured (or estimated by pacing) in four directions using a laser measure. Symmetrical canopies are measured in one direction only, with dimensions in the remaining directions assumed to be similar.

3.11. All estimated dimensions are noted in the data.

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[2] *Mahheck, C. & Breloer, H., 1998. The Body Language of Trees: A Handbook for Failure Analysis. London:H.M.S.O.*

TREE SURVEY CODES

NO:	Tree number on survey plan		
SPECIES:	Common/English name		
HEIGHT (m):	Existing tree ht		
STEM DIA (mm):	Trunk diameter 1.5m above ground		
CROWN SPREAD:	Branch spread in N,E,S,W		
CROWN CLEARANCE:	Canopy ht above ground in N,E,S,W		
AGE:	S	Sapling	
	SM	Semi Mature	
	M	Mature	
	OM	Over Mature	
	V	Veteran	
CONDITION:	A	Good (Green)	Specimen/high value tree Retention most desirable (40 years +)
	B	Moderate (Black)	Group value Retention if practical (20 years +)
	C	Poor (orange)	Nominal value only (10 years +)
	D	Dead/Weak (Red)	Removal recommended

4. Arboricultural Impact Assessment

4.1. It is proposed to retain the existing site access as well as detached double garage, demolish the existing dwelling and build a new residential dwelling on the subject site. The location of the new building and layout of the site can be seen on the appended plan.

Tree Removals/TPO

- *To facilitate the build, no removal of any tree is required.*
- *There is no tree on this site included within the latest TPO.*

Tree Surgery

4.2. Any work is limited only to lining crowns to provide adequate ground clearance for vehicles and construction.

Construction Impact

4.3. The new dwelling is sited outside the old building footprint and area of currently undisturbed ground. However, it is my opinion that its construction in a traditional manner will not have any notable impact upon the trees.

Service & Utility Provisions

4.4. The proposed layout allows for reasonably open access to all units. There is adequate space to service the site whilst avoiding all RPAs.

Future Pressure

4.5. It can be seen from the appended plan that there is sufficient off-set from the trees to provide some open space around the new dwelling and allow construction without impact.

4.6. The proposed new dwelling location does not result in situations where excessive shade might bring forth requests to heavily prune or remove the retained trees.

Spoil Removal

4.7. The spoil removal from within the site can be done entirely outside the RPAs of trees. Thus, no special measures or amendments to the tree protection strategy are required.

Summary

4.8. Provided the tree protection strategy is implemented as outlined in the following AMS, it is my opinion that this application is of low arboricultural impact, and thus acceptable.

4.9. Should the council wish to see move onerous tree protection methods, this can be ensured via an appropriately worded planning condition and should not be the basis for a reason for refusal.

4.10. There is scope to improve the site by managing/enhancing the existing trees within any future development while providing new boundary reinforcement planting in scale with the future site proposals and locality. All essential element of development will be an agreed tree protection scheme during construction and schedule of tree works to enhance the local landscape character.

4.11. Any development proposals should provide environmental enhancement by an agreed landscape strategy that includes selective mixed age tree planting, appropriate hard landscape finishes and enclosure details.

4.12. Any services or new access excavation related to residential development should be routed away from the canopies of retained mature trees. Any tree clearance, changes of level should avoid damage to retained trees.

4.13. All tree works should be carried out on site strictly in accordance with BS5837:2012. Special ground protection measures may be appropriate for access near retained trees during construction with careful regard to the significant change in ground levels.

5. Arboricultural Method Statement (AMS)

5.1. The tree protection on this site is subject to implementation as detailed in the following sections.

5.2. The recommendations of the British Standard have been applied where viable. Where deviations from the preferred approach are required, impact on any retained trees is minimized through a combination of supervision from an Arboricultural Clerk of Works and adherence to the associated method statement.

5.3. It is imperative that the strategy is followed to avoid not only impact upon the trees, but to adhere to any planning conditions.

5.4. The information from this section forward must be passed to the site foreman and cascaded to all relevant personnel involved in the project.

5.5. A plan showing the types of tree protection and their locations is appended to this report. It includes the tree survey data, existing site features along with the drainage changes in level and other factors that could impact trees.

5.6. The plan must be read in conjunction with this method statement.

Timing of Operations

5.7. It is essential that the following phasing is followed if trees are to be effectively protected throughout construction.

- *Erection of protection barriers*
- *Excavation for any groundworks & service trenches*
- *Construction phase*
- *No-dig drive and bin store surface installation.*
- *Removal of barriers after all external construction work has been completed.*
- *Soft landscaping (if required)*

5.8. All the protection measures listed above should be compatible with elements of the build program.

Arboricultural Clerk of Works (ACoW)

5.9. Where works have the potential to impact trees, supervision may be specified within the method statement.

5.10. This is typically the project arboriculturist, who will document the process and provide an auditable record of the operation. See subsections for requirements.

Construction Exclusion Zone (CEZ)

5.11. It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

5.12. Inside the exclusion zone, the following shall apply:

- *No mechanical excavation whatsoever;*
- *No excavation by any other means;*
- *No hand digging without a written method statement having first been approved by the project arboriculturist;*
- *No lowering of levels for any purpose (except removal of grass sward using hand tools);*
- *No storage of plant or materials;*
- *No storage or handling of any chemical including cement washings;*
- *No vehicular access;*
- *No fire lighting.*

5.13. In addition to the above, further precautions are necessary adjacent to trees:

- *No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builder's sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees;*
- *No fire shall be lit such that flames come within 5m of tree foliage.*

5.14. Variation from the above may be specified in the following sections of this method statement.This is only acceptable where detailed and will typically be subject to supervision by the ACoW.

Protection Barriers

5.15. Given the simplicity of this project, the installation of barriers as shown below willbe more than adequate to protect the subject trees throughout construction.

5.16. Barriers must be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the trees. Barriers should be maintained to ensure that they remain rigid and complete.



Typical tree protection on barrier construction

5.17. The default specification comprises a vertical and horizontal scaffold framework, well braced to resist impacts. The vertical tubes should be spacedat a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.

Ground Protection

5.18. If required, ground protection is to be installed as detailed below. It must be capable of supporting the expected loads and avoiding rutting, compaction and damage to the soil: as advised in section 6.2.3 of the British Standard.

5.19. Stages of ground protection installation:

1. *No plant machinery to be used in the area of ground protection for whatever reason.*
2. *Dismantle primary TPF and re-erect in secondary location (if required) OR erect fencing to protect any newly exposed CEZ not to be covered by ground protection.*
3. *Any shrubs, saplings to be removed, are to be cut or ground out to just below groundlevel rather than grubbed or winched out, which can damage roots of retained trees.*
4. *Lay woven geotextile over existing ground surface by hand.*
5. *Cover the area with compressible layer,woodchip, for example, using hand tools only.*
6. *Cover compressible layer with side butting scaffold boards or plywood boards.*
7. *Confirm surface is acceptable for use with project arboriculturist.*

8. *Area ready for construction access.*
9. *Any scaffolding required within the area will be erected with the uprights placed on spreader boards.*
10. *The boarding will be left in place until the construction works are finished.*



Scaffold ground protection

5.20. A single thickness of boarding laid on the soil surface will provide sufficient protection for pedestrian loads. However, for wheeled or tracked construction traffic movements within the Root Protection Area (RPA), ground protection will involve the use of temporary cellular confinement systems, reinforcedconcrete slabs or track-board systems details of which are to be specified by the project engineer and approved for use by the project arboriculturist and local authority before construction commences.

Tree Surgery

5.21. Should any pruning work be required, the following must be adhered to once any requisite consents are obtained.

5.22. All work will be carried out in accordance with BS3998[3] industry best practice and in line with any works already agreed with the council.

5.23. The statutory protection[4] [5] will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent personsand recommendations adhered to.

5.24. All operations shall be carefully carried out to avoid damage to the trees being treated or neighboring trees. No trees shall be used for anchorage or winching purposes.

3 *BS3998:2010- Recommendations for Tree Work.* London: British Standards Institute
4 *Wildlife and Countryside Act.* (1981) London: HMSO.
5 *Countryside and Rights of Way Act.* (2000) London: HMSO.

Installation of Underground Services

5.25. Mechanical trenching for the installation of underground apparatus and drainage severs any rootspresent and can change the local soil hydrology in a way that adversely affects the health of the tree. For this reason, particular care must be taken in the routing and methods of installation of all underground apparatus. Wherever possible, apparatus must be routed outside RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts. Inspection chambers should be sited outside the RPA.

5.26. Where underground apparatus is to pass within the RPA, detailed plans showing the proposed routing must be drawn up in conjunction with the project arboriculturist. In such cases, trenchless insertion methods should be used: Micro tunnelling, Surface-launched directional drilling, Pipe ramming or Impact moling (see BS5837:2012 Table 3), with entry and retrieval pits being sited outside the RPA. Provided that roots can be retained and protected, excavation using hand-held tools might be acceptable for shallow service runs. If this is the case, the following methodology must be followed:

6.47. Stages for installing services:

1. *Remove just enough tree protection fencing to allow access to the area and facilitate trenching.*
2. *Remove any surface vegetation or existing hard surfaces using hand tools.*
3. *Using and air-pick excavate the trench, keeping to minimum dimensions required.*
4. *Roots occurring in clumps of 25 mm diameter and over are encountered they will be retained and kept damp by covering with hessian (re-wetted as required). If required, these should be severed only following consultation with an arboriculturist as such roots might be essential to the tree's health and stability.*
5. *Feed in services.*
6. *Backfill trench with 200-300mm depth of excavated soil, or a mixture of excavated and imported topsoil to BS3882: 2015, firming down with heels.*
7. *Repeat step 7 until the trench is filled.*
8. *Re-erect tree protection fencing as per the approved plan.*

5.27. The method of excavation above, for trenching within RPAs, is using air excavation. This tool utilizes compressed air to remove soil from around tree roots causing minimal damage and can be run off a typical site compressor. Details of contractors supplying air excavation services could be provided on request if required.

5.28. Alternatively, trenchless technology, such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on roots of the subject tree. As no access/thrust pits will be located within the RPAs of the subject trees, the need for arboricultural supervision is limited.

5.29. Reference can be made to NJUG Vol 4[6] for guidance, but any approach must be approved by the project arboriculturist and brought to the attention of the local authority tree officer.

6 National Joint Utilities Group. (2010). Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) – Operatives Handbook. NJUG.

Appendices

I. Tree Categories Explained

BS5837:2012 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 desirableto 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 150mm	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

II. Tree Protection Plan

BS5837 Tree Survey Schedule

Surveyed Trees

Ref	Common Name	Height (m)	Stem Dia. (mm)	Canopy spread (m)	Crown Height Clearance (m)	Age Class	Vigour	Structural condition management remarks	BS category	Life expectancy
T1	Pear	5	160	N 3 E 3 S 3 W 3	N 1 E 1 S 1 W 1	Mature	Good	Frontage Amenity Tree	B	10-20 years
T2	Plum	8	150	N 2 E 2 S 2 W 2	N 2 E 2 S 2 W 2	Mature	Good	Amenity Tree	B	10-20 years
T3	Cedar of Lebanon	20	1200 (est)	N 9 E 9 S 9 W 9	N 2 E 2 S 2 W 2	Mature	Fair	Offsite TPO tree overhanging survey site Sparse growth on eastern section	B	20-40 Years
T4	Rowan	6	300	N 3 E 3 S 3 W 3	N 1 E 1 S 1 W 1	Mature	Poor	Heavy Ivy growth – Suppressed by T3	C/D	<10 years
T5	Cherry x2	9	300	N 4 E 4 S 4 W 4	N 2 E 2 S 2 W 2	Mature	Fair	Limited value amenity trees on lawn	B/C	<10 years
T6	Cypress x2	14	350	N 3 E 3 S 3 7W 3	N 1 E 1 S 1 W 1	Mature	Fair/Poor	Unmanaged conifers liable to wind throw Unsuitable while over shadowing south facing slopes. Consider removal to benefit other trees	C/D	<10 years

Note: The remaining tree cover consists of a number of dead, week, mishspen and overmature trees that have been omitted from this survey

Retained Trees

Ref	Common Name	Height (m)	Stem Dia. (mm)	Canopy spread (m)	Crown Height Clearance (m)	Age Class	Vigour	Structural condition management remarks	BS category	Life expectancy
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TPO

Ref	Common Name	Height (m)	Stem Dia. (mm)	Canopy spread (m)	Crown Height Clearance (m)	Age Class	Vigour	Structural condition management remarks	BS category	Life expectancy
T3	Cedar of Lebanon	20	1200 (est)	N 9 E 9 S 9 W 9	N 2 E 2 S 2 W 2	Mature	Fair	Offsite TPO tree overhanging survey site Sparse growth on eastern section	B	20-40 Years

Removed Trees

Ref	Common Name	Height (m)	Stem Dia. (mm)	Canopy spread (m)	Crown Height Clearance (m)	Age Class	Vigour	Structural condition management remarks	BS category	Life expectancy
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Summary

There is scope to enhance the site by managing/enhancing the existing trees within any future development while providing new boundary reinforement planting in scale with the future site proposals and locality.

Any development proposals should provide environmental enhancement by as agreed strategy that includes selective mixed age tree planting, appropriate hard landscape finishes and enclosure details.

Any services or new access excavations related to residential development should be routed away from the canopies of retained mature trees.

Any tree clearance, changes of level should avoid damage to retained trees.

All tree works should be carried out on site strictly in accordance with BS5837:2012. Special ground protection measures may be appropriate for access near retained trees during construction with careful regard to the significant change in ground levels.

Construction Exclusion Zone

It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

Inside the exclusion zone, the following shall apply:

- No mechanical excavation whatsoever;
- No excavation by any other means without arboricultural site supervision;
- No hand digging without a written method statement having first been approved by the project arboriculturist;
- No lowering of levels for any purpose (except removal of grass sward using hand tools);
- No storage of plant or materials;
- No storage or handling of any chemical including cement washings;
- No vehicular access;
- No fire lighting.

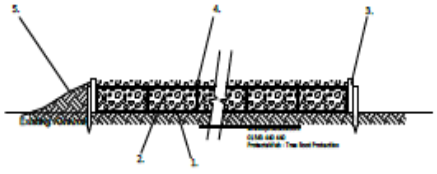
In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builder's sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees;
- No fire shall be lit such that flames come within 5m of tree foliage.

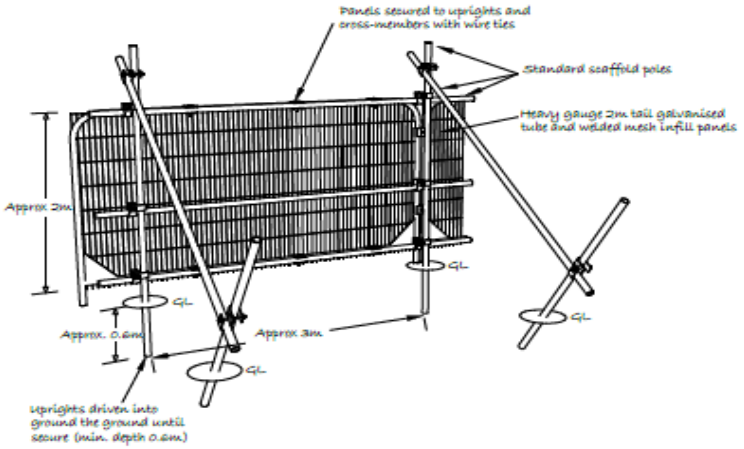
All weather signs shall be erected at reasonable intervals on the barriers. See example inset

No-dig style
Cellular Confinement Surface
Recommended Detail

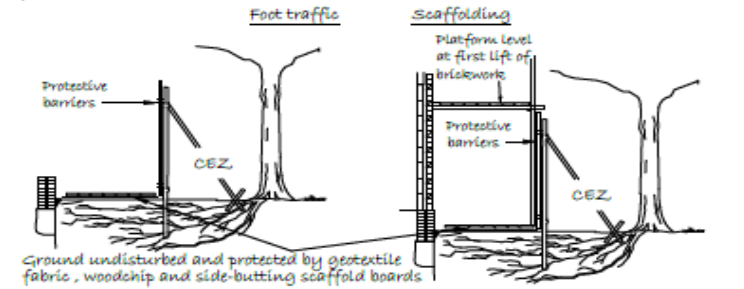
KEY
1. Root-tex 80 geotextile
2. 100mm deep Protectaweb tree root protection System infilled with 4/20 Clean Angular Stone to BS EN 13242 / EN 12620
3. Treated timber edging (Or other Edging detail acceptable)
4. 4/20m Clean angular stone to BSEN13242/EN 12620 Surcharge
5. Soil graded to edging (if required)



Default specification for protective barrier



Ground Protection



For pedestrian movements only, a single thickness of scaffold boards should be placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile.

For pedestrian operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards should be placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile.

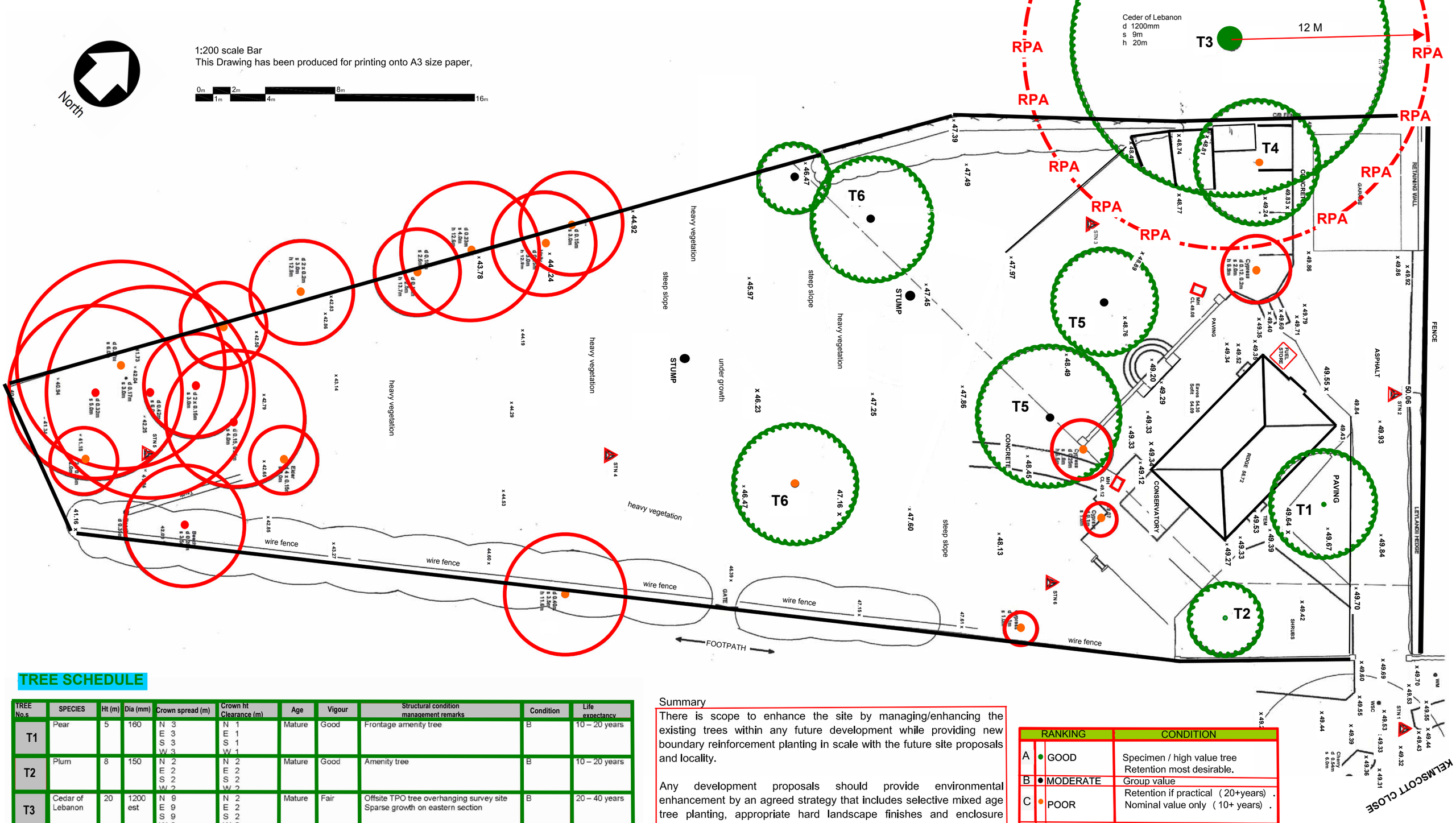
For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. pre-cast reinforced concrete slabs) should be employed to an engineering specification designed in conjunction with arboricultural advice to accommodate the likely loading to which it will be subjected.

III. Topographical Survey – Tree Condition Survey

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TREE SCHEDULE

TREE No.s	SPECIES	Ht (m)	Dia (mm)	Crown spread (m)	Crown ht Clearance (m)	Age	Vigour	Structural condition management remarks	Condition	Life expectancy
T1	Pear	5	160	N 3 E 3 S 3 W 3	N 1 E 1 S 1 W 1	Mature	Good	Frontage amenity tree	B	10 – 20 years
T2	Plum	8	150	N 2 E 2 S 2 W 2	N 2 E 2 S 2 W 2	Mature	Good	Amenity tree	B	10 – 20 years
T3	Cedar of Lebanon	20	1200 est	N 9 E 9 S 9 W 9	N 2 E 2 S 2 W 2	Mature	Fair	Offsite TPO tree overhanging survey site Sparse growth on eastern section	B	20 – 40 years
T4	Rowan	6	300	N 3 E 3 S 3 W 3	N 1 E 1 S 1 W 1	Mature	Poor	Heavy ivy growth – suppressed by T3	C/D	<10 years
T5	Cherry x 2	9	300	N 4 E 4 S 4 W 4	N 2 E 2 S 2 W 2	Mature	Fair	Limited value amenity trees on lawn	B/C	<10 years
T6	Cypress x 2	14	350	N 3 E 3 S 3 W 3	N E W S	Mature	Fair/poor	Unmanaged conifers liable to windthrow Unsuitable while overshadowing south facing slope. Consider removal to benefit other trees / aspect	C/D	<10 years

Summary

There is scope to enhance the site by managing/enhancing the existing trees within any future development while providing new boundary reinforcement planting in scale with the future site proposals and locality.

Any development proposals should provide environmental enhancement by an agreed strategy that includes selective mixed age tree planting, appropriate hard landscape finishes and enclosure details.

Any services or new access excavations related to residential development should be routed away from the canopies of retained mature trees. Any tree clearance, changes of level should avoid damage to retained trees.

Al tree works should be carried out on site strictly in accordance with BS5837:2012. Special ground protection measures may be appropriate for access near retained trees during construction with careful regard to the significant change in ground levels.

RANKING		CONDITION
A	GOOD	Specimen / high value tree Retention most desirable.
B	MODERATE	Group value
C	POOR	Retention if practical (20+years) . Nominal value only (10+ years) .
D	DEAD/WEAK	Removal recommended.

DRAFFIN ASSOCIATES — Environmental Design

JOB 8 KELMSCOTT CLOSE
CAVERSHAM RG4 7DG

EXISTING SITE AND TREE PLAN

DRG Carried out in conjunction with Treeline Arboricultural Services
Based on Land Survey dwg no. J081/01 dated 01/2013

SCALE 1:200 DRAWN ST DATE JULY 2023

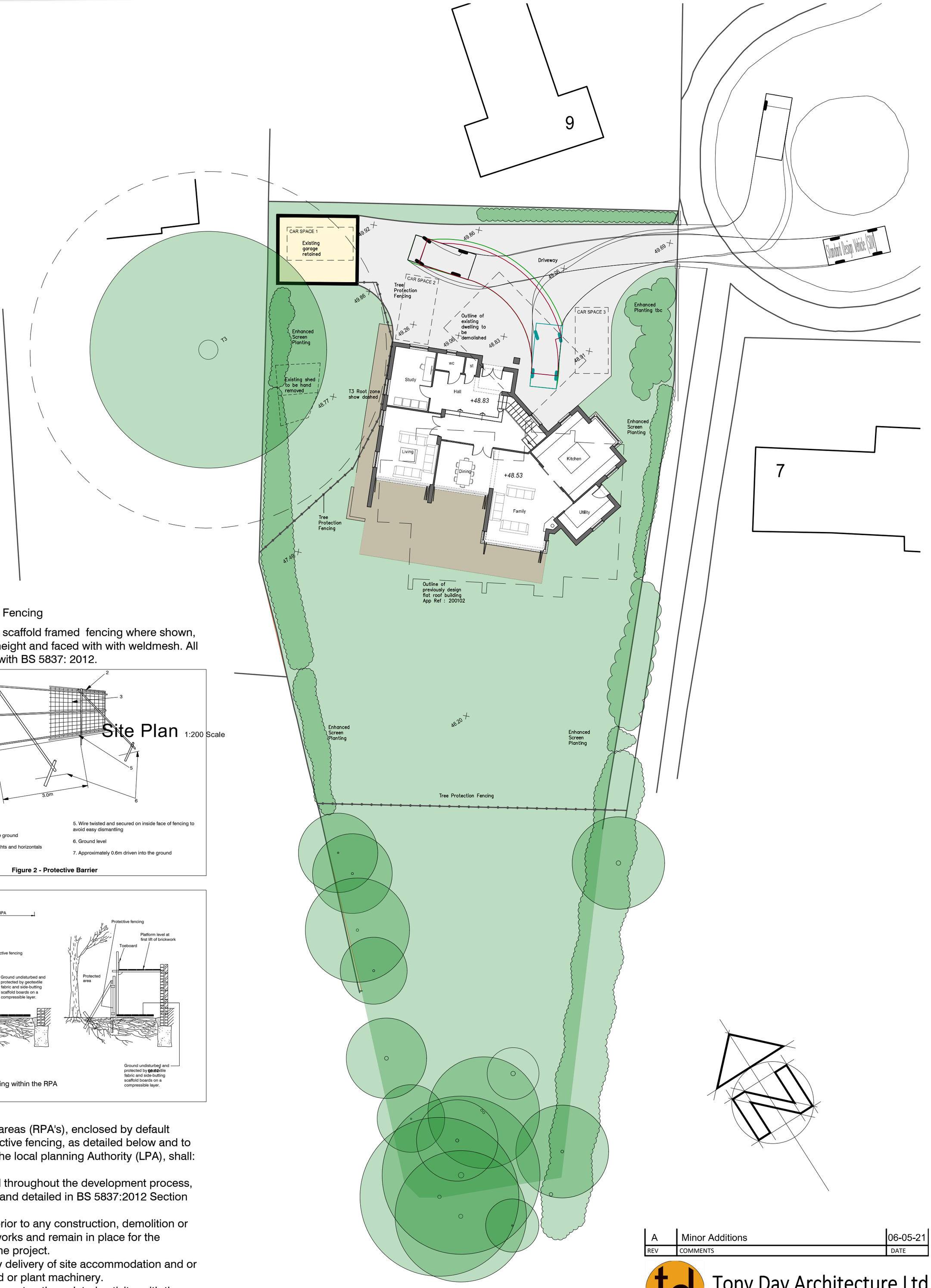
2847-EX-01

Draffin Associates Ltd
Landscape Planning
Consultants
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IV. Proposed Site Plan – New Design

1:200 scale Bar
This Drawing has been produced for printing onto A2 size paper,
If printing on A3 please use the scale below for reference.

0m 2.0m 8.0m 16.0m
1.0 4.0m



Site Plan 1:200 Scale

Tree Protection Fencing

Provide tubular scaffold framed fencing where shown, being 2.3m in height and faced with with weldmesh. All in accordance with BS 5837: 2012.

1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Weldmesh wired to the uprights and horizontals
4. Standard clamps
5. Wire twisted and secured on inside face of fencing to avoid easy dismantling
6. Ground level
7. Approximately 0.6m driven into the ground

Figure 2 - Protective Barrier

Figure 3. Scaffolding within the RPA

NOTES
Root protection areas (RPA's), enclosed by default temporary protective fencing, as detailed below and to be agreed with the local planning Authority (LPA), shall:

1. Be protected throughout the development process, as specified and detailed in BS 5837:2012 Section 6.2, Fig 2
2. Be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project.
3. Preclude any delivery of site accommodation and or materials and or plant machinery.
4. Preclude all construction related activity, with the sole exception of specified arboricultural works and any other works carried out under supervision that has been agreed by all parties, and:
5. Preclude the storage of all development related materials and substances including fuel, oils, additives, cement and or any other deleterious substances.
6. Any incursions into RPA's must be by prior arrangement, following consultation with the LPA.

REV	COMMENTS	DATE
A	Minor Additions	06-05-21

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CLIENT Mr H. Moallemi

PROJECT 8 Kelmscott Close, Caversham, Reading, Berkshire

DRAWING PROPOSED SITE PLAN

Albany House
14 Shute End
Wokingham
RG40 1BJ
0118 380 5585

DATE April 2021

SCALE 1:100 @ A2 DRAWN P Bonney NO 3648 / 305 REV A

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