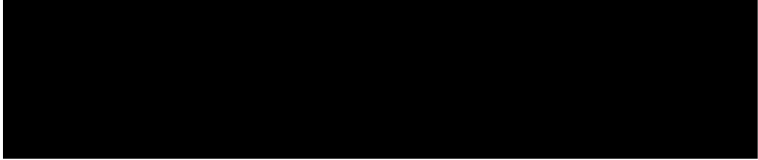


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 Arboricultural Consultancy

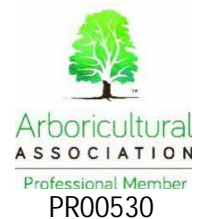


Arboricultural Impact Assessment
 and
 Method Statements

For

Land rear of 524 St Johns Road, Clacton On Sea, Essex

Date	12 th March 2024
Client	DC&B
Report by	Mr James Choat BSc, M Arbor A
Site	524 St Johns Road
Reference No.	TPSarbQU0117
Issue No	2
Revisions	1 – Revised layout



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1. Summary

- 1.1.1 Tree Planning Solutions received instruction from Duncan Clark & Beckett Ltd to complete a suitable arboricultural site survey and produce this subsequent arboricultural impact assessment (AIA) for an area of land rear of 524 St Johns Road, Clacton Sea, Essex.
- 1.1.2 Trees are a material consideration during the planning application process and require specialist input at the design stage to ensure the success for the end use of the proposed development whilst retaining the best tree specimens. Generally, local authorities provide local plan policies for planning applicants with regards to the suitable retention and protection criteria for trees during the application process and subsequent construction phase, and the level of detail that will be required to determine the application - details can be found on the local authority web site. Central government provide 'The National Planning Policy Framework' (NPPF 2021), which provides specific details of application acceptability; specifically paragraphs 131 and 179 relate to tree retention, biodiversity, habitat including trees and woodlands. Consultants providing arboricultural impact assessment (AIA) apply British Standard 5837 2012 criteria to demonstrate the suitable retention, design and protection of trees during the application / design process. The completed assessment forms part of the application detail and will aid the Planning Authorities decision with regard to the impact of the proposed development on the existing tree stock and local landscape character.
- 1.1.3 The survey and this report are provided in support of a planning application for the construction of 8 dwellings with access, parking and garages.
- 1.1.4 The site was surveyed on the 30th August 2023, the weather was sunny with a light wind, conditions for surveying trees were good. 6 individual trees and 1 tree group were surveyed as part of the assessment for trees that could be affected either directly or indirectly by the construction of the proposed development.
- 1.1.5 The report provides the following information and data in accordance with the criteria provided within BS 5837 2012 'Trees in relation to design, demolition and construction Recommendations'.

Tree survey and schedule

Tree constraints data and plan

Arboricultural Impact Assessment

Arboricultural Method Statement and Tree Protection Plan

1.1.6 This report pays particular reference to:

British Standard 5837 2012	Trees in relation to design, demolition and construction Recommendations
British Standard 3998 2010	Recommendations for tree work
NHBC CH 4.2	Building near trees
NJUG 4	National Joint Utilities Group 'Working Near Trees'
NPPF 2021	National Planning Policy Framework

1.2 Statutory protection

1.2.1 It is understood that trees referenced as G1 within this report are subject to a Tree Preservation Order TPO No 09/05 tree reference G1, T13, T14 and T15 Oak. The site is not situated within a designated conservation area (CA). The hedgerows at the site are not subject to the hedgerow regulations 1997 as they are not situated on land used for agricultural purposes, keeping of horses, common land or land situated within a site of special scientific interest, special protection area or special area of conservation. It is recommended the applicant obtain written consent from Tendring District Council and where applicable the Forestry Commission, before carrying out recommendations contained within this report. Furthermore, no works should be carried out to any 3rd party tree(s) without first obtaining consent from the owner(s) of the tree(s).

1.2.2 Multi agency nature on the map GIS data (MAGIC) was checked 29/08/23, specifically data sets relating to trees - land designations and habitats (woodlands). The site is subject to site of special scientific interest (SSSI) impact zones – (Riddles Wood SSSI and Clacton Cliffs and Foreshore SSSI).

1.3 Limitations

1.3.1 The applicant has supplied a plan of the existing and proposed (desired) site, no further information has been provided.

The following plans have been provided with the instruction for this report:

Existing layout drawing provided by DC&B Ltd.

Proposed layout/concept drawing provided by DC&B Ltd.

1.3.2 This survey is for the purpose of determining the impact of the development upon existing trees; it is not a detailed tree condition survey and should not be used as such. All trees have been assessed from ground level; no aerial or below ground parts have been inspected in detail.

1.3.3 The survey remains valid for 12 months. If during 12 months following the tree survey adverse weather conditions have occurred, or the site environment changed in any form, it is recommended the trees be reassessed.

1.3.4 The content of this report remains the property of Tree Planning Solutions unless otherwise stated. This report is not to be copied without written consent from Tree Planning Solutions.

1.3.5 The consultant is a qualified arboriculturist, occasionally opinions and views are provided regarding buildings and structures, the consultant is not a qualified buildings surveyor or structural engineer and therefore all opinions and views should be supported by a qualified structural/building engineer.

1.4 Qualifications

1.4.1 The consultant has been working within the Arboricultural industry for 24 years as a tree surgeon, tree officer and consultant. Knowledge and experience are regularly updated by attending industry related seminars and courses. Continued professional development is

verified by professional membership to the Arboricultural Association (membership No. PR00530), CPD is updated on-line, a record can be provided upon request.

1.4.2 The consultant holds a Bachelor of Science (BSc) degree in Rural Resource Development, a Higher National Diploma (HND) in Rural Resource Management, the Lantra Professional Tree Inspection Award, the RFS Level 2 Certificate in Arboriculture, Level 3 certificate in Ecology and is a registered user of Quantified Tree Risk Assessment (QTRA).

2.1 The site

2.2 Site description

2.2.1 The site is located to the northwest of Clacton On Sea and accessed from St Johns Road. The site is situated within an urban position with reasonable canopy cover, ward canopy cover is 3% for the Bockings Elm Ward (GB Ward Canopy Cover Web Maps). The trees subject of this report are situated to and beyond the boundaries of the site with few internal trees. The application site contains the following built structures – detached dwelling and hard stand pads for static caravan use. The application site consists of the following habitat / green features – improved grass, shrubs and trees.

2.3 Topographical survey

2.3.1 A topographical survey was provided with the instruction for this project. All site features plotted to the survey were present during the site visit. The site is generally flat with no significant changes in levels that will influence root orientation or morphology, it is therefore reasonable to assume the root protection areas will be normal in terms of size and shape. Various inspection chambers were recorded during the survey, the date of construction/servicing is not known, it is not known therefore whether the below ground services are affecting / have previously affected the rooting zone of the trees. Overhead services were not recorded during the tree survey.

2.4 Soils

2.4.1 British Soil Geology Maps scaled at 1:50,000 show the site to be situated on bedrock of London Clay Formation – clay, silt and sand and superficial deposits of Cover Sand – Clay, silt and sand. Sand and gravel soil texture is likely to offer a deeper rooting environment than that of clay as the roots can easily penetrate and explore sandy soils with little resistance, clay like soils tend to restrict root exploration. Clay soils can be modified by moisture, either reduced or increased in volume by fluctuations in moisture content, such fluctuations can influence how structures perform and therefore may require additional, engineered support to improve the stability of the structure. Local variations and differing soil seams of superficial and bedrock deposits do occur, differing bedrock and superficial deposits will have a different soil texture and structure to those described above and will perform differently. It is recommended core samples be obtained to determine the exact soil texture at the site.

Part 1 Tree Survey, Constraints and Impact Assessment

3.1 Tree survey and schedule

3.1.1 The tree schedule provides an account of all the trees at or adjacent to the site and is written on to a tabular form. Each tree is given a reference number (T1, T2, T3, G1 etc) that is plotted on to a tree survey plan to be cross-referenced with the tabular form. Contained within the schedule are the dimensions of each individual tree and any notable physiological or mechanical defects. An estimated life expectancy is derived from the condition and context of the tree and then graded for the retention suitability. The tabular form can be found in appendix 1 with explanatory notes for each column heading. The tree survey plan can be found in appendix 2. Provided below is a table of the existing trees, their current condition and British Standard 5837 category grading. The categories for retention are; A - high value, B - moderate value, C - low value and U - unable to be retained as a living tree, each category is given a colour code for use with the tree survey plan (appendix 2), A - Green, B- Blue, C - Grey and U- Red. There are further sub-categories used alongside the categorisation; 1 arboricultural, 2 landscape and 3 wildlife or historical values. British Standard 5837 recommends trees with a stem diameter of less than 150mm are categorised as C regardless of condition, form etc. it is assumed that a tree of this size can either be transplanted or replaced without any negative impact upon tree-based visual amenity. Veteran and Ancient trees are automatically graded as category A due to their age and / or wildlife associations, although they will likely contain significant defects, generally the defects are the microhabitats that increase their value.

Table 1 Tree condition table

Tree ref	Species Common and Scientific	Age class	Observations	Category grading
T1	Oak Quercus robur	M	Good condition. Pruning wound at 2m, occluded well. Recent large branch tear wound at 4m.	A1
T2	Oak Quercus robur	M	Lower stem buried in sand, unable to assess lower crown. Leaves and crown appeared full and healthy for time of year.	B1
T3	Oak Quercus robur	M	Good condition. Damage to primary lateral at 4m.	A1
G1	Oak Quercus robur	M	Group of 9 trees all sharing crown. Assessed as a group. Recent concrete bases placed within PPA. Crown raised on all trees.	A1/2
T4	Oak Quercus robur	M	3rd party, unable to assess..	A1
T5	Oak Quercus robur	M	Stem forks at 1m, rib formed at union. Wound on southern stem at 3m	A1
T6	Oak Quercus robur	EM	Good condition. Close proximity to existing dwelling.	B1

3.2 Further discussion

3.2.1 Visual amenity value.

Visual tree amenity value is low, the tree features cannot be seen clearly from the publicly maintainable highway, footway or other significant public vantage point. The trees vary in height to a maximum height of 18m but are not prominent features within the street scene.

3.2.1 Landscape value

The tree features provide good, localised landscape value, the trees help screen and reduce the perceptual load of the built form at and beyond the site boundaries reducing the visual impact of the hard landscape and roof line within the immediate area.

3.2.2 Wildlife value

The wildlife value is reasonable, the structural diversity and connectivity is reasonable, with reasonable connectivity of the ground, sub and higher canopy layers which provides reasonable foraging, breeding, migratory and navigational opportunity for less mobile fauna. The trees are mostly native specimens, non -native trees tend to have limited numbers of associated native insects. The trees are a mix of early mature – mature specimens with a limited number of microhabitats as these tend to favour older / veteran specimens.

3.2.3 Condition

The condition of all trees is reasonable with few notable defects recorded.

3.2.4 Provided below is the British Standard 5837 categorisations with total number of surveyed trees for each corresponding categorisation:

A = 5

B = 2

C = 0

U = 0

3.2.5 All category A trees should be retained. The development design should seek to accommodate such trees using special construction techniques and design modification. There should be only very minor work within the RPA and only minor crown works, generally those required to improve the condition of the tree. Category A trees are

those that offer a significant contribution to the amenity and character of the area, they have a long-life expectancy and contain very few defects.

- 3.2.6 The majority of category B trees should be retained where their long-term retention is achievable. A mixture of tree works, design modification and special construction techniques should be employed to accommodate category B trees. Generally, category B trees have a life expectancy over 20 years and offer a medium to long-term contribution to the amenity/character of the area. Category B trees contain occasional defects that can be remedied with suitable tree works.

4.1 Tree constraints

4.1.1 The above and below ground tree constraints are represented by the present crown spread and root protection areas (RPA) of each retained tree. British Standard 5837 provides a calculation for root protection areas for both single and multi-stem trees. The constraints are plotted to a site plan around each individual tree; the constraints plan is used to determine the site layout feasibility and further clarifies suitable tree retention or removal. The constraints plan can be found in appendix 2. Further consideration should be given to the future growth potential for each retained tree; the table below provides estimated growth rates that should be considered when achieving a suitable design layout.

4.1.2 Provided below is a constraints table that provides data for the radial distance required for the RPA, the present height and spread of the tree, the future increase in height and spread of the tree in 10 years and tree management considerations.

Table 2 Tree constraints table

Tree ref	Species Common and Scientific	Height in m	Stem diameter in mm	Radial distance required for RPA	Branch spread				Height of crown clearance in m	Estimated increase in crown height in M in 10 years	Estimated increase in crown lateral spread in M in 10 years	Management considerations
					N	E	S	W				
T1	Oak Quercus robur	18	890	10.68	8	8	8	8	5	2	2	None
T2	Oak Quercus robur	12	450	5.4	8	8	8	8	5	2	2	None
T3	Oak Quercus robur	18	720	8.64	8	8	8	8	5	2	2	None
G1	Oak Quercus robur	17	600	7.2	6	6	6	6	5	2	2	None
T4	Oak Quercus robur	18	500	6	8	8	8	8	5	2	2	None
T5	Oak Quercus robur	17	610	7.32	8	8	8	8	5	2	2	None
T6	Oak Quercus robur	15	380	4.56	4	4	4	4	2	2	2	None

5.1 Arboricultural impact assessment

5.1.1 Provided below is an assessment of the impact of the development on each individual tree and any design requirements for the site. Such factors include tree preservation orders, tree amenity, tree retention, removal of structures within RPA, infrastructure requirements, construction of infrastructure, end use of space, tree loss / new planting, light issues, proximity to structures, relationship with new homeowners and tree nuisance.

Table 3 Arboricultural Impact Assessment

Tree Ref	TPO/CA/other statutory protection. Amenity assessment. Retention recommendation.	Removal of existing structures and hard surfacing within RPA	Proposed Infrastructure within RPA	Construction methods for proposed infrastructure	End use of space	Tree loss and new planting	Shading and light	Proximity to structures	Future pressure for tree removal/works	Seasonal tree nuisance
T1, T2 and T3	Trees not subject to TPO. Site not situated within a designated conservation area. MAGIC GIS checked 29/08/23 – site listed within SSSI Impact Zones (various). Reasonable amenity value, good landscape and wildlife value. Trees recommended for retention	Existing concrete bases to be removed from RPA. Broken out using handheld concrete breakers working backwards from the trees. All excavators to work outside of the RPA.	Proposed patio within minor section of RPA of T3.	Supervised hand excavation. See method statement provided within section 9 and tree protection plan appendix 5.	Generous sized amenity space will accommodate 3 large trees. Target pruning and crown lift management in future to maintain suitable crown clearance within amenity space.	N/a	Slight loss of late afternoon / evening sunlight in mid-summer months. Target pruning and crown lift management in future to maintain suitable crown clearance for light levels.	Trees at suitable distance from the dwellings so as not to cause future general nuisance. Target pruning and crown lift management in future to maintain suitable crown clearance from structures.	Low, assuming tree works are carried out as specified.	Leaf and fruit dispersal Nuisance of blocked drains, gutters etc. Recommend use of guards as appropriate to prevent blockages occurring. Use surfaces that do not tarnish from tree deposits (shingle, loose stone, grass, etc.)

Tree Ref	TPO/CA/other statutory protection. Amenity assessment. Retention recommendation.	Removal of existing structures and hard surfacing within RPA	Proposed Infrastructure within RPA	Construction methods for proposed infrastructure	End use of space	Tree loss and new planting	Shading and light	Proximity to structures	Future pressure for tree removal/works	Seasonal tree nuisance
G1	Trees subject to TPO No 09/05. Site not situated within a designated conservation area.. MAGIC GIS checked 29/08/23 – site listed within SSSI Impact Zones (various). Reasonable amenity value, good landscape and wildlife value. Trees recommended for retention	Existing concrete bases to be removed from RPA. Broken out using handheld concrete breakers working backwards from the trees. All excavators to work outside of the RPA.	N/a	N/a	Generous sized amenity spaces will accommodate large trees. Target pruning and crown lift management in future to maintain suitable crown clearance within amenity space.	N/a	Trees situated to north of proposal. No shading to occur from trees. Amenity spaces and dwellings will receive good amount of sunlight.	Trees at suitable distance from the dwellings so as not to cause future general nuisance. Target pruning and crown lift management in future to maintain suitable crown clearance from structures.	Low, assuming tree works are carried out as specified.	Leaf and fruit dispersal Nuisance of blocked drains, gutters etc. Recommend use of guards as appropriate to prevent blockages occurring. Use surfaces that do not tarnish from tree deposits (shingle, loose stone, grass, etc.)
T4, T5 and T6	Trees not subject to TPO. Site not situated within a designated conservation area. MAGIC GIS checked 29/08/23 – site listed within SSSI Impact Zones (various). Reasonable amenity value, good landscape and wildlife value. Trees recommended for retention	Existing concrete bases to be removed from RPA. Broken out using handheld concrete breakers working backwards from the trees. All excavators to work outside of the RPA.	Proposed patio within minor section of RPA of T5.	Supervised hand excavation. See method statement provided within section 9 and tree protection plan appendix 5.	Generous sized amenity spaces will accommodate large trees. Target pruning and crown lift management in future to maintain suitable crown clearance within amenity space.	N/a	Loss of morning sunlight in mid-summer months. Afternoon and evening sunlight is unaffected. Target pruning and crown lift management in future to maintain suitable light levels.	Trees at suitable distance from the dwellings so as not to cause future general nuisance. Target pruning and crown lift management in future to maintain suitable crown clearance from structures.	Low, assuming tree works are carried out as specified.	Leaf and fruit dispersal Nuisance of blocked drains, gutters etc. Recommend use of guards as appropriate to prevent blockages occurring. Use surfaces that do not tarnish from tree deposits (shingle, loose stone, grass, etc.)

5.2 Further discussion

5.2.1 Below ground services for drainage, electricity, gas, water, telecoms, are to be located outside the RPA of the retained trees or connected to existing services within the site. If however, this is not viable then trenchless methods of working will be adopted, shallow trenching may be permitted although a trial trench should be prepared to determine the presence of roots and the impact upon the health of the tree affected. Overhead services such as lighting columns, electricity, telecoms, etc. are to be outside the present and future canopy spread, use of Table 2 'Tree Constraints' will aid design.

5.2.2 Guttering and drains will have guards to prevent leaf/fruit drain blockages. Where a significant loss of rainwater water is likely due to loss of natural soft surfaces, the rainwater drainage will be redirected into the soil area of the retained trees. The drainage will result in an even and slow distribution within the soil environment, it will not cause waterlogged conditions or damage to the soil structure, structural engineer to advise further.

5.2.3 The information provided in the impact assessment and constraints advice has provided a basis for tree retention, works specification and construction techniques required. Further details for this can be found in the following sections of this report.

6.1 Tree removals and impact assessment

6.1.1 Provided below is a table of the trees to be removed and the impact upon visual amenity value. This is to be cross-referenced with the tree survey plan provided in appendix 2.

Table 4 Trees to be removed

Trees to be removed	Reason for removal	Impact upon visual amenity
None	N/a	None. No trees are to be removed as part of the development proposal.



Part 2 Arboricultural Method Statement

7.1 Tree works specification

7.1.1 All tree works are to be completed as a starting phase of development unless otherwise stated.

7.1.2 All works are to be completed to BS3998 2010 'Recommendations for tree works'

7.1.3 Research suggests that tree works are better completed when the trees are using the least amount of energy and when conditions do not favour pathogens. It is recommended that the works specified below be carried out in midsummer July/early August or the dormant period Jan/Feb. Specifically, times of bud break and leaf abscission should be avoided. This may need further assessment for different species or for aged/veteran trees whose energy reserve and potential to kinetic ratio is susceptible to change from minor tree works. Where this is likely to occur, a separate management plan for that individual tree may be required.

7.1.4 Provided below is a table showing tree works specification. The key for works urgency can be found in Appendix 1 Explanatory notes.

Table 5 Tree works specification

Tree ref	Species Common and Scientific	Age class	Tree works to facilitate development and / or access	Preliminary management recommendations	Category grading
T1	Oak Quercus robur	M	Break out existing base from RPA. See method statement provided in section 9 of AIA.	None	A1
T2	Oak Quercus robur	M	Break out existing base from RPA. See method statement provided in section 9 of AIA.	Remove sand from base.	B1
T3	Oak Quercus robur	M	Break out existing base from RPA. Hand excavation within RPA for construction of patio. See method statement provided in section 9 of AIA.	None	A1
G1	Oak Quercus robur	M	Break out existing base from RPA. See method statement provided in section 9 of AIA.	None	A1/2
T4	Oak Quercus robur	M	Break out existing base from RPA. See method statement provided in section 9 of AIA.	None	A1

TPS

Tree ref	Species Common and Scientific	Age class	Tree works to facilitate development and / or access	Preliminary management recommendations	Category grading
T5	Oak Quercus robur	M	Break out existing base from RPA. Hand excavation within RPA for construction of patio. See method statement provided in section 9 of AIA.	None	A1
T6	Oak Quercus robur	EM	None	None	B1



8.1 Tree protection method statement

8.1.2 Tree protection is required to prevent physical damage to the stem, branch and crown structure. Tree protection is used also to prevent indirect damage caused by loads passing over the root protection area that would otherwise cause compaction of the soil. Soil compaction reduces soil pore space, which in turn reduces; soil air, available water and nutrients, the anaerobic environment will prevent healthy and strong root growth (elongation, thickening, mycorrhizal association, etc.). Prolonged anaerobic soil conditions will lead to longer term poor tree health with symptoms (crown die back, sparse crown, poor extension growth, etc.) not evident until well after the occurrence. The simplest and most effective way to prevent damage to any retained tree on the development site is the provision of a construction exclusion zone around the tree and its calculated rooting area.

8.1.2 The areas for protection will see the RPA confirmed on the ground with the erection of a scaffold frame with wire mesh attached (Please see appendix 3 Barrier protection construction profile, diagram 2). Where site personnel require access across the RPA, ground protection will be installed utilising scaffold boards laid on a compressible layer (100mm of woodchip) with geotextile membrane beneath, as per British Standard 5837 section 6.2.3.3 (see appendix 5 tree protection plan). Where plant less than 2 tonnes requires access across an RPA, the compressible layer, as described above, should be increased to 200-300mm and the scaffold boards substituted for composite boards fit for the applied load, plant above 2 tonnes should utilise an engineered solution using reinforced concrete slabs or specialised track mats fit for the applied load.

8.1.3 The barrier protection will contain and display information highlighting the protected tree and consequences of any breach of tree protection. Please see appendix 4, example of informative to be placed on barrier protection.

8.1.4 The tree protection plan is shown in appendix 5. This shows; the RPA for each retained tree, the location of protective barriers/ground protection and areas for site storage and contractors parking.

9.1 Construction method statements

9.1.2 Provided in this section are arboricultural method statements primarily concerned with working within the RPA of the retained trees. The method statements are designed to minimise/remove any identified impact or damage/disturbance that may otherwise occur. The method statements provided should be distributed to all key staff involved with the development.

9.2 Excavation within the RPA

9.2.1 Excavation will be required within the RPA of T1, T2, T3, T4, T5, and G1 as identified in the impact assessment section 5 and tree protection plan appendix 5 to remove the existing concrete pads, and construction / hard landscaping within the RPA (patio). The method statement provided below is in accordance with British Standard 5837 section 7.2.

Sequential method statement for supervised hand excavation and root pruning

1. Hard surfaces - Using a handheld concrete breaker and excavators from outside of the RPA, working backwards away from the tree/s, break out the existing hard surface to the original construction depth, assumed to be 400mm. All debris to be stored outside of the RPA.
2. Soft surfaces - Underlying soils and / or existing grassed surfaces - Remove turf layer with turf remover set to 50mm, use an air spade or rake to soften the underlying or exposed soils. Carefully remove exposed soils using handheld tools only (spade, shovel, soft brush, trowel) to achieve excavation depth 50mm-100mm for preparation purposes only for construction of the patio.
3. Where roots are pliable and will not damage from movement, push to side of pit or downwards.



4. Any exposed roots should immediately be wrapped or covered in damp hessian to prevent desiccation and to protect them from rapid temperature changes.
5. If required, sever any roots with a diameter less than 25mm (use a sharp tool to provide a clean cut across the cross section near to a root junction/ growth point).
6. Avoid severing roots greater than 25mm or clumps of roots (root mats). If this is necessary, then request an arboriculturist to attend the site to assess likely impact upon tree health and future stability.
7. Prior to backfilling any roots should be removed from the protective wrapping and surrounded by sharp sand, or other loose granular fill, before soil or other material is replaced. The backfill is to be free from any contaminants or foreign objects.
8. Monitor tree health during next 2 growth seasons. Check leaf colour, size, density and extension growth.

9.3 Soft surfaces within RPA

- 9.3.1 Provided below is a method statement to avoid damaging/disturbance to the roots of the retained trees during soft landscape operations.

Damage to roots is to be avoided, large structural roots may be seen at or near the surface and where they radiate from the stem of the tree from large buttresses. After around 4m radial distance structural roots tend to taper to around 3cm in diameter.

No tractor mounted or heavy plant rotavating machinery is to be used unless working on surface fit for purpose to reduce/spread load and prevent soil compaction.

Cultivation is to be completed using manual hand tools only.



The existing soil is to be used, where additional soil is required it should be contaminant free, well drained and suitable PH, texture and structure for the site and planting/existing trees/shrubs.

Changes in ground levels are to be avoided, any lowering or raising of levels should be carried out using a suitable method statement that maintains continued soil conditions for gas exchange and water percolation.

Planting is to be done with care and to avoid severing tree roots; generally, planting should be completed outside the RPA.

10.1 General arboricultural considerations

10.1.1 Provided in this section are wider arboricultural considerations to be used either at the later design stage or for the 'on-site' contracting team. Further information contained within this section provides details on tree and associated wildlife legislation. The method statements provided should be distributed to all key staff involved with the development.

10.2 Storage

10.2.1 There is to be no storage within the RPA of any retained trees. An outline area can be designated at pre-commencement construction site meeting.

10.3 Contractors parking

10.3.1 There is to be no parking within the RPA of any retained trees. An outline area can be designated at pre-commencement construction site meeting.

10.4 Slope

10.4.1 All mixing and storage of materials/chemicals to be done on a pre-prepared flat/level surface with sealed sides to prevent any runoff. Storage of all chemicals/materials likely to cause harm to the trees should be in a sealed container or area with a bund to prevent run off if spillages occur. Site personnel are to have access to spillage treatment equipment.

10.5 Services

10.5.1 Methods for service run construction within the RPA are micro tunnelling, Surface launched directional drilling, pipe ramming and impact moling. Method statements for the above listed modes of service provision should be provided by the relevant utility companies. Shallow trenching may be acceptable for minor services; if shallow

trenching is required then hand excavation should be adopted using an approved method statement.

10.5.2 All overhead services are to be located outside the present and future crown spread of the retained trees, use tree constraints table provided in section 4 to aid design.

10.6 Levels

10.6.1 No stripping or raising of levels within the RPA without consent from the local authority. Where site levels require lowering, the use of hand excavation or an air spade should be adopted using an approved method statement. If site levels are to be raised the material added should allow for water infiltration and gaseous exchange allowing the roots to carry out their normal biological function, the use of structural soil and a below ground aeration system may be required depending on the size of the area affected and depth.

10.7 Development phasing

10.7.1 All contracting staff working at the site should be briefed on approved working practices and protection requirements for the retained trees.

10.7.2 The tree works specification should be completed following approval from the local authority.

10.7.3 Prior to the commencing of development the chosen arboriculturist should re- assess all retained trees and provide further assessment.

10.7.4 All barrier/ground protection should be erected/laid and confirmed as correct by the arboriculturist. All signs should be placed on the barriers at a height of 2m at 3m intervals.

10.7.5 Excavation as detailed within section 9 and tree protection plan appendix 5.

10.7.6 Barrier/ground protection altered after intensive phase of development.

10.7.7 Soft landscaping as final phase of development.

10.7.8 Barrier / ground protection removed following landscaping phase.

10.8 Monitoring

10.8.1 Key site personnel

Architect and Contractors

Name	Position	Contact details
Builder TBC		
DC&B	Design Consultants	

Planning Authority

Name	Position
Clive Dawson	Tree and Landscape Officer

Arboriculturist

Name	Position
James Choat	Arboricultural Consultant

10.8.2 It is recommended that all trees and protection methods be monitored for the duration of development. A qualified arboriculturist will make a regular visit; the project arboriculturist is to carry out an assessment of tree health and protection condition and make recommendations when required.



10.8.3 Site specific monitoring

Item	Number of visits required	Timing of visit
Pre-commencement site meeting with key personnel. (Contractor, site manager, architect). Tree works Tree protection installation (ground/barrier) as per tree protection plan and method statements within supplied arboricultural report. Identify area for contractors parking, site storage and access. Place 'exclusion zone' signs at 2m height, 3m intervals facing outwards on temporary fencing.	1 – 2 depending on whether items can be completed on same day.	Meeting to be arranged between architect and site manager before construction phase.
Site visit during construction phase to monitor tree health and tree protection condition.	5 – 3 specifically when breaking out the existing concrete bases. 1 specifically when excavating within the RPA for construction of the patios.	During construction phase
Removal of tree protection.	1	After intensive construction phase

10.8.4 The above is subject to the client/site manager informing the project staff of the proposed date for each development activity. Following each site visit a brief report (see appendix 6 arboricultural monitoring form) is to be sent to the client and local authority within 24 hrs following the visit. Any incidents will be dealt with within 2 hours and to be reported to the project arboriculturist, photos to be provided via email and recommendations provided verbally, if required a site visit should be undertaken to provide further advice/ recommendations.

10.9 Incidents/variations

10.9.1 Planned

Site manager to contact arboriculturist for any anticipated/planned variations
 Arboriculturist to assess the impact upon trees and offer advice regarding alternative methods
 Arboriculturist to update the local authority tree officer / planning officer providing details of variations

10.9.2 Non-planned



Site manager to inform arboriculturist of incident

Site manager to photograph incident and send to arboriculturist

Arboriculturist to provide initial advice via telephone or email

Arboriculturist to make site visit within 1 day to assess impact upon trees and offer advice to reduce/remove impact

Arboriculturist to update the local authority tree officer providing details of incident and control measure taken to reduce/remove impact.

10.10 Wildlife legislation

10.10.1 The Wildlife and Countryside Act 1981, The Habitats Directive 1994 (consolidated under Conservation of Habitats and Species Regulations 2017) and The Countryside and Rights of Way Act 2000. These acts protect certain species of flora and fauna; it is an offence to intentionally or recklessly destroy species or habitats contained within these acts. Trees, especially veteran or ancient, can support associated flora and fauna that is protected via the above legislation. It is recommended the applicant employ a suitably qualified ecologist to carry out a survey of the area to ensure no offence is committed. See the following link for further details.

<https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications>

10.11 Tree legislation

10.11.1 The Town and Country Planning Act 1990. It is an offence to cut down, uproot, lop, top, or cause wilful damage or destruction to a tree subject of a tree preservation order or conservation area. Such acts will lead to prosecution and if convicted a fine not exceeding £20,000 in the magistrate's court; if the case is referred to the crown court the fine may be unlimited. See the following link for further details.

<https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>

10.11.2 Hedgerow regulations 1997 protect certain hedgerows from being removed, certain exemptions apply. A removal notice is required to be sent to the local authority for consideration to determine whether the hedgerow is important before the authority

can permit the removal of a hedgerow subject of the above regulations. See the following link for further details.

<http://www.legislation.gov.uk/uksi/1997/1160/contents/made>

10.11.3 Forestry Act 1967 as amended - Felling licences are issued by the forestry commission, certain exemptions apply. Before felling trees, a check with the Forestry Commission should be made to ensure a felling licence is not required. See the following link for further details. <http://www.legislation.gov.uk/ukpga/1967/10/contents>

11.1 Conclusion

11.1.1 All surveyed trees have been categorised in accordance with British Standard 5837 2012.

Visual tree amenity value is low, the tree features cannot be seen from the publicly maintainable highway, footway or other significant public vantage point. The trees vary in height to a maximum height of 18m but are not prominent features within the street scene. The tree features provide good, localised landscape value, the trees help screen and reduce the perceptual load of the built form at and beyond the site boundaries reducing the visual impact of the hard landscape and roof line within the immediate area. The wildlife value is reasonable, the structural diversity and connectivity is reasonable, with reasonable connectivity of the ground, sub and higher canopy layers which provides reasonable foraging, breeding, migratory and navigational opportunity for less mobile fauna. The trees are mostly native specimens, non -native trees tend to have limited numbers of associated native insects. The trees are a mix of early mature – mature specimens with a limited number of microhabitats as these tend to favour older / veteran specimens. The condition of all trees is reasonable with few notable defects recorded.

11.1.2 Hard surfaces are to be removed from all retained trees with the exception of T6, a suitable method statement is provided in section 9 and the tree protection plan appendix 5 to limit the impact that would otherwise occur without supervision of an arboriculturist. Supervised hand excavation within small sections of the RPA of T3 and T5 will be required to construct the associated patios for the dwellings. A suitable method statement for hand excavation is provided to reduce the impact that would otherwise result from mechanical excavation resulting in tearing of roots unnecessary root loss and soil compaction. It is likely the trees will require occasional, future routine management to maintain within the proposed amenity spaces, the works can be limited to minor target pruning (2m) and crown lifting of the lower laterals to maintain suitable crown clearance and light levels. No further tree works are required to facilitate construction of the proposal or access to the site. The trees can be adequately protected using temporary barriers in accordance with BS 5837. Following development, the trees will not be further obscured, the development is therefore considered to have a low impact upon visual amenity value.

11.1.3 Tree protection and method statements have been provided within this report to reduce the risk of direct and indirect development related damage that may otherwise occur to the retained trees. In conclusion, assuming the method statements and tree protection are implemented as part of the development, the proposal can be constructed with reduced disturbance to the trees.

TPS

