

Arboricultural Report

for planning purposes

179 Lambourne Road
Chigwell
Essex
IG7 6JU

December 2021

191109-PD-11

Project	191109-PD-11 – 179 Lambourne Road, Chigwell
Report Type	Arboriculture (Planning)
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1 INTRODUCTION

Instruction

- 1.1 This *Arboricultural Report* (the 'Report') has been instructed by the homeowners of 179 *Lambourne Road* (the 'Client').

Author

- 1.2 This Report was written by Christopher Wright (the 'Author'). Christopher is an arboricultural consultant dealing with trees in relation to all forms of human activity including built development. He is a *Technician Member* of the *Arboricultural Association*, a member of the *Royal Forestry Society*, a member of the *Institute of Chartered Foresters*, holds the *Level 6 Diploma in Arboriculture (ABC)*, the *Professional Tree Inspection certificate (LANTRA)*, and has received a *BSc (Hons) Conservation and Environment (2:1)* from *Writtle University College*.

Proposed development

- 1.3 The proposed development at 179 *Lambourne Road* ('the Site') is for the demolition of the existing dwellinghouse and the construction of a new dwellinghouse ('the proposed development'), within the area administrated by *Epping Forest District Council* ('the LPA').

Scope

- 1.4 This report has been provided to assist all parties involved in the planning process, in accordance with *British Standard 5837:2012 - Trees in relation to design demolition and construction - Recommendations* ('BS5837').

Site survey

- 1.5 The Site was visited, and the trees and other vegetation surveyed, referring to the recommendations of BS5837, on 9th of December 2021 by the Author. The details of this survey are found within the Report appendices.
- 1.6 The survey was not an assessment of the health and safety of the trees. However, any trees identified as a current notable risk to people and property will have been highlighted in the schedules, at Appendix B.



Map 1: Showing the area discussed in this Report within the indicative line.

Report preparation

External documents

- 1.7 This Report has been prepared, with reference to the following supplied documents and information:

- proposed architectural plans; and
- topographical survey.

Appendix

- 1.8 The appendices of this Report include:

- Appendix A (plans); and
- Appendix B (schedules).

Definition of terms

- 1.9 The following terms and abbreviations may be used within this Report. These terms are defined by BS5837 as follows, unless provided without quotation marks:

- **Arboricultural Method Statement ('AMS')** - *"methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained"*.

- **Local Planning Authority ('LPA')** - the planning department of the borough, district, or metropolitan council.
- **Root Protection Area ('RPA')** - *"layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority."*
- **Service(s)** - *"any above- or below-ground structure or apparatus required for utility provision" that may for example include "drainage, gas supplies, ground source heat pumps, CCTV and satellite communications".*
- **Tree Protection Plan ('TPP')** - *"scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures".*

2 SITE INFORMATION

Current Site use

- 2.1 The Site currently comprises a single dwellinghouse, in addition to a rear garden area that includes a small outbuilding, swimming pool, and other light structures (see Photo 1 and Photo 2 below).



Photo 1: Looking east towards the eastern edge of the Site, showing T1-T4 (centre) either side of which are conifer hedgerows (G5 and G6).

Geotechnical information

British Geological Survey

- 2.2 The *British Geological Survey* ('BGS') provides on-line information, regarding the general soil properties of an area, including the underlying bedrock and any superficial deposits that overlay the bedrock. This information indicates that the Site is situated upon a bedrock of *Claygate Member* (comprised of clays, sands, and silts), over which the recorded superficial deposits are *Lowestoft Formation* (comprised of chalks, clays, gravels, sands, and silts).

- 2.3 There are no publicly available borehole logs within or adjacent to the Site that are provided by the BGS.

Root morphology

- 2.4 A soil comprised of chalk will in many instances promote more extensive shallow rooting by trees, in comparison to a heavy clay soil, as chalk soils are lighter and more free-draining (roots thus have to grow to greater distances, for nutrients), as well as usually comprising a thin topsoil layer with the alkaline chalk beneath where root growth is generally restricted¹. However, considering the variability of the properties of the *Lowestoft Formation*, it is difficult to conclude how root morphology in principle may be affected by soil type in this instance.

1 - Forestry Commission. (2005) Information Note FCN078 - The influence of soils and species on tree root depth.

3 TECHNICAL ARBORICULTURAL DETAILS

Landscape details

Distribution

- 3.1 The surveyed trees and hedgerows are located around the edges of the Site, which are located in most instances outside of the Site itself and within adjacent land ownerships (i.e., third-party ownership) - particularly, within the rear garden area, which is surrounded on most sides by off-Site trees and hedgerows.



Photo 2: Looking north-east along the northern boundary of the Site, showing G7 (left) as a point of reference.

Visibility

- 3.2 The surveyed trees and hedgerows are generally visible, from the public realm area to the south of the Site. However, the largest trees (i.e., T1-T4) are set back to the rear of dwellinghouses along the highway and are only partially visible, and the trees within the front area of the Site are mostly small. The surveyed trees and hedgerows therefore do not comprise prominent or important features of the local area.

BS5837 details

Survey criteria

- 3.3 The surveyed trees and vegetation items have been generally categorised, in terms of the landscape criterion as defined in BS5837, which focusses on the wider value afforded in contributing to the character of the landscape, in place of the individual merits of each item.

BS5837 categorisation

- 3.4 In BS5837 terms, the surveyed trees and other forms of vegetation comprise:
- *Category C* (i.e., low-quality): 8no. trees and 7no. groups/hedgerows.

Root Protection Areas

- 3.5 Based on the ground conditions of the Site that includes the known or foreseeable presence of buried structures, in addition to the context within which the surveyed trees and other vegetation items are growing, the standardised circular RPAs have not been amended.

Statutory protections

Conservation Areas

- 3.6 The LPA publishes details of its *Conservation Areas* ('CAs') online. According to this information, the Site and any surveyed trees adjacent to the Site are not within a CA.

Tree Preservation Orders

- 3.7 The LPA does not publish details of its *Tree Preservation Orders* ('TPOs') online. It is not therefore known, from this information, whether TPOs apply to any of the surveyed trees. No direct communications have been undertaken with the LPA, to obtain information relating to any TPOs.

4 PLANNING POLICY AND GUIDANCE

National

Background information

- 4.1 Planning policy at national level is set out in the government's *National Planning Policy Framework* (the 'NPPF')² that was published in July 2021.
- 4.2 At this level, policy addresses the key principles of development. At its core, there is a presumption in favour of sustainable development incorporating good and durable design, by combining economic, social, and environmental strands in a balanced manner. Trees comprise an element of green infrastructure, which is one aspect of the environmental strand of sustainability.

National Planning Policy Framework 2021

- 4.3 In the context of the proposed development, the NPPF provides the following guidance that is relevant in terms of the surveyed trees:
- **Paragraph 131** - *"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. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users."*
 - **Paragraph 174** - *"Planning policies and decisions should contribute to and enhance the natural and local environment by: ... b) 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 ... trees and woodland".*

Local

Background information

- 4.4 Planning policy at the local level is currently set out in the LPA's *Epping Forest District Local Plan 1998 and Alternations 2006* (the 'LDP').

Epping Forest District Local Plan 1998 and Alternations 2006

4.5 In the context of the proposed development, the current LDP provides the following guidance that is relevant in terms of the surveyed trees:

- **Policy LL10: Adequacy of Provision for Landscape Retention** - *"The Council will refuse to grant planning permission for any development which it considers makes inadequate provision for the retention of: (i) trees".*

5 ARBORICULTURAL IMPACT ASSESSMENT

Removals

Numerical data

- 5.1 The proposed development will include the removal of 1no. tree (i.e., T11), in addition to 3no. vegetation groups comprising shrubs (H8, G13, and G14).

Reasons for removal

- 5.2 These removals are specified, in order to facilitate the proposed development - primarily, to create sufficient space around the area of works to demolish the existing dwellinghouse and construct the new one, though also to facilitate the implementation of a new landscaping scheme (that is not yet specified - refer also to paragraph 5.4 below).



Photo 3: Looking south-east towards the entrance gate, showing T11 (left) as a point of reference.

Impacts of removals

- 5.3 The specified removals are not prominent features of the public realm, with the vegetation groups having no visibility and T11 having only a limited visibility (due to its small size - see Photo 3 above). The loss of this tree from the landscape, in addition to the other specified vegetation, will have a minor effect on its overall character.

Mitigation greening

- 5.4 The proposed development does not at this stage specify the planting of new trees (or any other forms of vegetation). However, there is sufficient space within the Site for new tree planting to occur - primarily, within the larger side/rear garden area, though potentially also within the front driveway area. Such detail can in this instance be provided in response to a planning condition.

Pruning

Numerical data

- 5.5 The proposed development includes the pruning of 3no trees (i.e., T1, T4, and T12), in addition to 3no. vegetation groups comprising shrubs and a hedge (G5, G6, and H9). In all instances, the specification is for the lateral pruning of the overhanging elements back to the boundary line.
- 5.6 With regard to the lateral pruning of the conifers (i.e., G5, G6, and H9), to the extent that is appropriate some overhang into the Site may remain, to ensure that the pruning work does not cut into the old wood - the reason for this is that the conifers will not regrow from this brown wood, so in the interests of maintaining good private visual amenity the recommendation of this Report is for these conifers to be pruned only to the point that ensures green foliage is retained on the sides facing into the Site. However, if the Client does opt for complete pruning back to the boundary line then this is in private terms acceptable and it is therefore what this Report specifies as the maximum extent of pruning.

Reasons for pruning

- 5.7 The basis for the pruning of the overhanging crown elements back to the boundary line is to establish sufficient clearance to implement the proposed development (including demolition - notably, for T1 and T4 as shown in Photo 4 and Photo 6 below), though also helps to ensure that there is more aerial space for new planting within the Site so that it does not conflict with off-Site vegetation.



Photo 4: Looking north-east towards the eastern boundary, showing T1-T4 (centre), G5 (right), and G6 (left) - all overhang into the Site.

Impacts of pruning

- 5.8 The specified pruning works affect only limited areas of total crown volume and in all instances will not affect the visual qualities of the affected trees from a public amenity perspective. By extension, the overall condition of the affected trees in structural and physiological terms will likely be impacted only to a minor extent.

Retained tree juxtapositions

- 5.9 In relation to the retained trees and vegetation (i.e., those outside of the Site - notably, around the side/rear garden), the proposed development does not place any increased pressure upon these items that may result in inappropriate management (e.g., major branch removal or heavy pruning). The proposed development is therefore considered to be acceptable, regarding its juxtaposition to the retained trees and vegetation.

Demolition works

General protection details

- 5.10 The TPP at Appendix A sets out the specifications for tree protection that are associated with the implementation of the proposed development, based on the details that are currently available. This TPP includes an AMS, which provides some baseline information relating to the installation and management of tree protection measures.

Access and logistics

- 5.11 The access into the Site will be from the highway (i.e., from the south), which is adjacent to the off-Site tree just behind the wall line (i.e., T12). The TPP for the demolition phase therein specified the retention of the existing hard surfaces, which will act as sufficient ground protection to protect the soil environment within the RPA.
- 5.12 With regard to the management of access through the main area of the Site, the phasing of works at this stage is not confirmed though it is recommended that the main dwellinghouse be demolished first, after which point the outbuildings and light structures can be demolished. This order is recommended, as to access some of the outbuildings and light structures the barrier protection will need to be temporarily removed (refer to the sub-section starting at paragraph 5.14, for more detail).

Demolition of the dwellinghouse

- 5.13 The demolition of the existing dwellinghouse will not affect the off-Site trees, subject to the barrier protection being installed and maintained during this item of work. Therefore, this element of the demolition process has a low risk of harm to trees.

Demolition of outbuildings and light structures

- 5.14 The outbuildings and light structures within the wider Site will need to be demolished with hand tools, in order to ensure that the adjacent trees and vegetation items are appropriately protected. Noting that these structures in some areas are located in areas where levels change abruptly (e.g., the outbuilding by the swimming pool), it is necessary for the levels beneath foundations and sub-bases to be retained (i.e., no further excavation into the soil environment).
- 5.15 Given that many of these structures are located behind barrier protection, it is recommended that this element of demolition is undertaken once the dwellinghouse has been demolished, so the temporary removal of barrier protection does not carry an increased risk of harm to the affected trees.
- 5.16 As soon as structures have been demolished, the barrier protection will be re-installed to the specified location (presumably, based on the above recommendation of demolition processes, the location as set out in the TPP for the construction phase).



Photo 5: Looking north-east towards the off-Site tree by the Site entrance (i.e., T12).

Construction works

General protection details

- 5.17 The TPP at Appendix A sets out the specifications for tree protection that are associated with the implementation of the proposed development, based on the details that are currently available. This TPP includes an AMS, which provides some baseline information relating to the installation and management of tree protection measures.

Access and logistics

- 5.18 The access into the Site will remain from the south (as established in paragraph 5.11). Therefore, the TPP again specifies the retention of the existing surface within the RPA of T12, for the same reasons.

Construction of the dwellinghouse

- 5.19 The construction of the proposed dwellinghouse will not affect the off-Site trees, subject to the barrier protection being installed and maintained during this item of work. Therefore, this element of the construction process has a low risk of harm to trees.

Construction of the new outbuilding

- 5.20 The proposed outbuilding at the northern corner of the Site is located within the nominal RPAs of G6 and G7, which are both conifer groups. It is not considered appropriate for foundation designs to be designed specifically to avoid tree roots of the specimens within these groups, because the groups are not of a value that merits such an approach to design - in effect, the design of the outbuilding to avoid tree roots would be a disproportionate response in relation to the value of these groups.
- 5.21 In realistic terms, there is likely to be some root damage. However, given that the affected trees are relatively small and comprise parts of larger groups, the overall effect is considered to be low and on balance acceptable in the circumstances that present.

Finished levels

- 5.22 The proposed development at this stage does not provide details for finished levels across the entire rear garden. Nominally, the finished level near to the proposed outbuilding (and outside of RPAs) is specified as 80.70, which is very similar to the existing level of the central area of the garden (as shown on the *Tree Survey* at Appendix A). However, the levels do vary within the garden area, and within RPAs it will be necessary for levels to be specified so that there is no disturbance within RPAs (beyond that specified for the construction of the proposed outbuilding as per paragraph 5.20).
- 5.23 On balance, it is appropriate for levels to be specified as part of a technical hard and soft landscaping plan, which will need to be developed in conjunction with the arboriculturist, to ensure that appropriate detail is specified to provide effective protection of the off-Site trees (notably, T1-T4). This will be best secured through the provision of a short AMS, which can be provided as part of a hard and soft landscaping package, in response to a planning condition.



Photo 6: Looking east towards the outbuilding adjacent to the swimming pool, looking towards T1-T4 (centre) as points of reference.

Landscaping works

- 5.24 Landscaping operations will typically take place at the end of the construction period. These works will normally require the removal of barrier fencing, to facilitate the required access for works. There is a risk that plant and machinery may damage the soil structure within which tree roots are growing.
- 5.25 These risks can be managed, by maintaining good professional standards of work and by working in accordance with an AMS. The principle of avoiding soil disturbance or changes in levels within the RPAs of retained trees must be followed, unless advice has been sought by the project arboriculturist.

Services and utilities

- 5.26 At this stage of the planning process, details pertaining to the location of new service runs and any required access to existing runs are not established. In this context, it is not possible to determine the level of impact of this element of the designs to the retained trees.

- 5.27 In the eventuality that access to existing service runs or to install new service runs involves work operations within the RPA of the retained trees, the impact to the trees can be managed by following the recommendations of BS5837, which includes as a normative reference the *National Joint Utilities Guidance*³.

3 - NJUG. (2007) Volume 4: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees - Issue 2. UK: National Joint Utilities Group.

6 CONCLUSIONS

- 6.1 The proposed development includes the removal of 1no. tree and 3no. vegetation groups, in addition to the pruning of 3no. trees and 3no. vegetation groups. In all instances, the affected items are of a low quality (i.e., *Category C*), and the effects of these specified works are in overall terms acceptable.
- 6.2 There is capacity for new tree planting, within the Site - notably, within the side/rear garden area, which will address the specified removal of T11. Further details relating to planting can be provided in response to a planning condition.
- 6.3 The processes of demolition and construction in overall terms carry a low level of risk to the off-Site trees and the TPPs at Appendix A set out the principles of protection (and must be read in conjunction with this entire Report). Further detail relating to levels will need to be provided, as part of a *RIBA Stage 4* landscape specification, to ensure that level changes within RPAs do not occur. Such landscape details will also need to consider the methodology of works, from an arboricultural perspective, and the details will therefore benefit greatly from the provision of a short AMS for landscaping works (that can again be provided in response to a planning condition).

7 APPENDICES CONTENTS

APPENDIX A - Plans

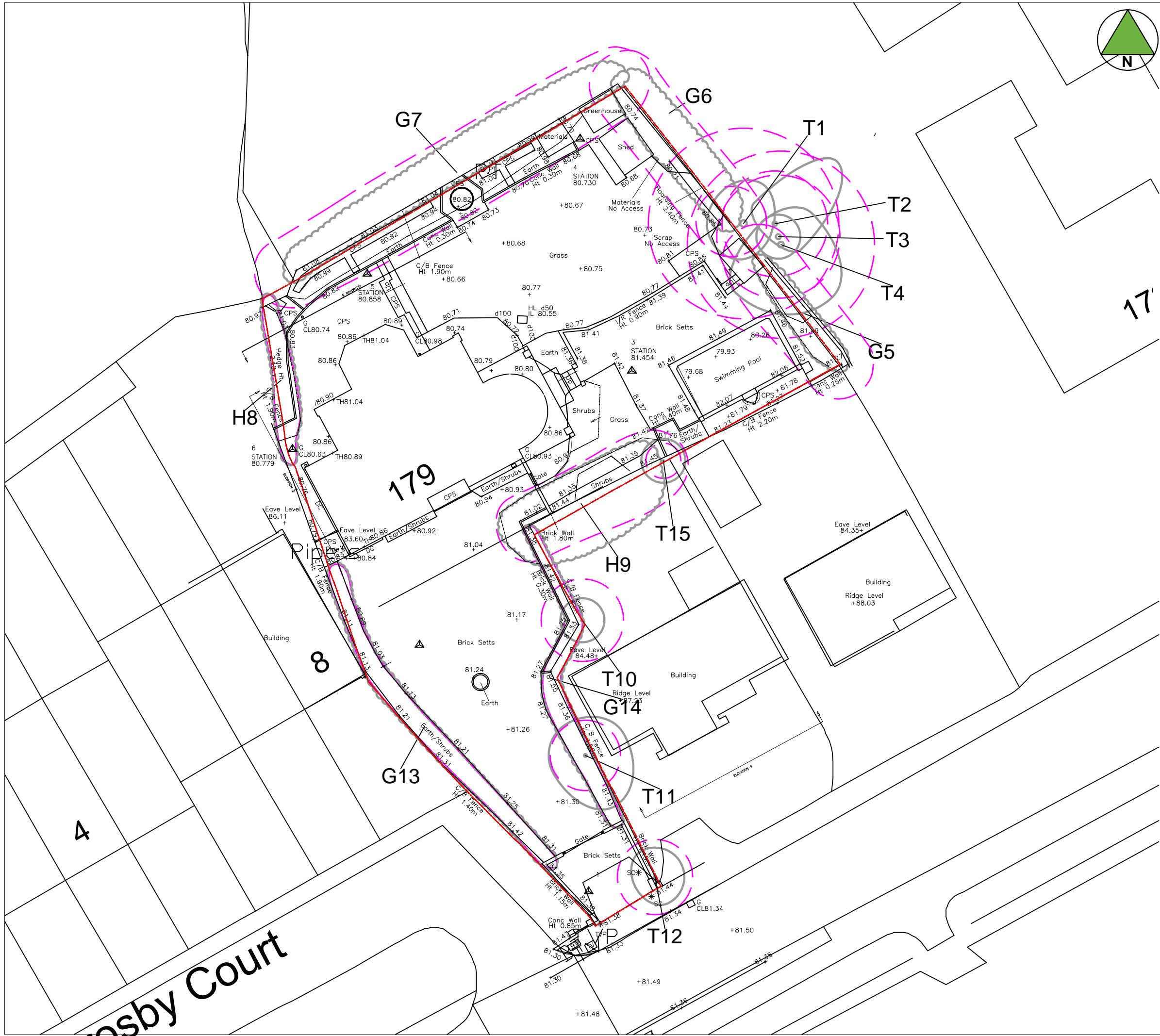
- 191109-P-10a Tree Survey
- 191109-P-11 Proposed Layout and Tree Works
- 191109-P-12 Tree Protection Plan for Demolition
- 191109-P-13 Tree Protection Plan for Construction

APPENDIX B - Schedules

- 191109-PD-10a Tree Schedule

APPENDIX A - Plans

- 191109-P-10a Tree Survey
- 191109-P-11 Proposed Layout and Tree Works
- 191109-P-12 Tree Protection Plan for Demolition
- 191109-P-13 Tree Protection Plan for Construction



The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

BS 5837:2012 TREE RETENTION CATEGORIES

- Category A**
Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B**
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- 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.
- Category U**
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS5837 Root Protection Areas**
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.
- Site boundary**

10.12.21	Updated from December 2021 survey	HR
REV	DATE	DESCRIPTION
Base Drawing		
2019	OSMAP & TOPO	

Title		
Tree Survey		
Client		
Home owner of 179 Lambourne Road		
Project		
179 Lambourne Road, Chigwell, Essex IG7 6.		
Date	Drawn by	Checked by
December 2021	HR	CW
Drawing No	Rev	Scale
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TIM MOYA ASSOCIATES









The Barn, FeltimoresPark, Chalk Lane, Harlow, Essex CM17 0PF
0845 094 3268 | info@tma-consultants.co.uk
www.timmoayaassociates.co.uk

arboriculture ecology landscape innovation

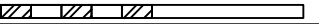


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-  **Category U**
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
-  **BS5837 Root Protection Areas**
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.
-  Trees and groups to be removed shown shaded grey.
-  Trees and groups to be pruned back shown shaded orange.
-  Site boundary

REV	DATE	DESCRIPTION	DRAWN
Base Drawing			
-	16.12.21	002-P-006-Proposed Site Plan	



Title Proposed Layout and Tree Works		
Client Home owner of 179 Lambourne Road		
Project 179 Lambourne Road, Chigwell, Essex IG7 6J		
Date December 2021	Drawn by HR	Checked by -
Drawing No 191109-P-11	Rev -	Scale 1:250@A:

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ARBORICULTURAL METHOD STATEMENT

TREE WORKS

Only the tree works specified within this report may be undertaken, after the appropriate planning consents have been acquired and in order to implement the consent. In the event of any uncertainty regarding tree works, the arboriculturist will be consulted and where appropriate the Local Planning Authority.

All tree works will be undertaken, in accordance with the best-practice recommendations provided in BS 3998:2010. The statutory responsibilities as outlined in the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010 will also be complied with.

TREE PROTECTION FENCING

The tree protection fencing and (where appropriate) ground protection, will be installed as specified within this plan, prior to the commencement of any demolition and construction works. No plant or materials will be delivered to site prior to the construction of the tree protective fencing other than those required to install the tree protection fencing. On every third panel, a sign will be fixed that states "Tree Protection Zone (CEZ). Keep out. Any incursion into this area must be agreed in advance with the arboriculturist and Local Planning Authority." An example of this sign is provided within this plan.

The position of the tree protection fencing must not be amended and no individual panels will be uncoupled, without the agreement of the arboriculturist and/or Local Planning Authority.

SERVICES AND DRAINAGE

The installation of drainage runs, manholes, storage tanks, and utilities will be positioned outside the root protection areas (RPAs) of retained trees. If the installation of new services and drainage runs are required within the root protection areas (RPAs) of retained trees, all methods of working will follow the guidance within Table 3 of BS 5837 or the National Joint Utilities Group's (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (volume 4, issue 2).

Excavation works within the RPAs of retained trees will be undertaken manually with the use of hand tools only (under the supervision of the arboriculturist), unless otherwise agreed in advance by the arboriculturist. It is recommended that an air lance - and if required a soil vacuum - is used, to excavate service trenches within RPAs. If soil conditions are not suitable for this method of excavation, alternative hand tools can be used once agreed in advance by the arboriculturist.

All roots greater than 25mm in diameter will be retained and will immediately be wrapped in hessian or another appropriate material, to prevent desiccation and temperature fluctuations. Roots will be pushed aside to allow for runs to be installed, where this is practical and without causing root damage.

No machinery will be permitted within the CEZ, at any time, unless agreed in advance with the arboriculturist.

ARBORICULTURAL CLERK OF WORKS

The monitoring of activities at the Site will occur, at the following points:

- To sign-off the tree protection measures;
- To sign-off the tree works;
- At other points as specified within this Report and the TPP.

It will be the responsibility of the main contractor (or other managing individual or organisation) to confirm the date and time of attendance, providing at least five working days of notice so that the project arboriculturist can confirm attendance.

GENERAL PROTECTION METHODS

No fires will be permitted, within 20m of the crown of any tree or other area of vegetation that includes hedgerows and groups of trees.

No changes in soil level will occur, within the CEZs and RPAs, without agreement in advance with the arboriculturist.

The CEZs will at all times remain free of liquids, materials, vehicles, plant, and personnel, without agreement in advance with the arboriculturist.

Any liquid materials spilled on site will immediately be cleared up. If liquids are spilled within 2m of any CEZ or RPA, the incident will immediately be reported to the arboriculturist, to determine the appropriate response.

All damage to trees and other vegetation will immediately be reported to the arboriculturist, to determine the appropriate response.

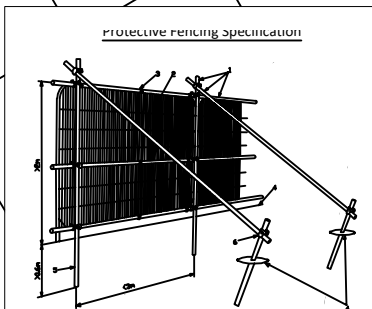


**TREE PROTECTION
AREA
KEEP OUT!**

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE
AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL
CONSULTANT

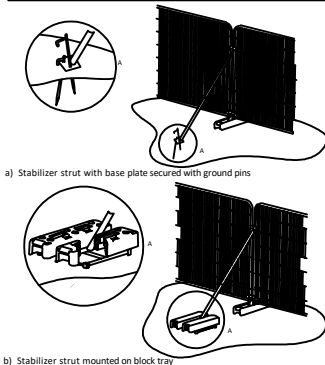


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- Key
- 1 Standard scaffold poles
 - 2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels
 - 3 Panels secured to upright and cross-members with wire ties
 - 4 Ground levels
 - 5 Uprights driven into the ground until secure (minimum depth 0.6m)
 - 6 Standard scaffold clamps

Figure 3 Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray



The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

BS 5837:2012 TREE RETENTION CATEGORIES

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

Position of barrier fencing and Construction Exclusion Zone.

Existing surfaces to be retained during demolition, for the purposes of ground protection.

Structures within this area to be demolished with handheld tools after the main dwellinghouse has been demolished entirely, unless otherwise agreed with the arboriculturist in advance of works commencing. No excavations or other forms of disturbance into the soil beneath sub-bases and foundation elements.

REV	DATE	DESCRIPTION	DRAWN
-	-	Base Drawing	-
1	15.12.21	TOPO	-

Title Tree Protection for Demolition		
Client Home owner of 179 Lambourne Road		
Project 179 Lambourne Road, Chigwell, Essex IG7 6.		
Date December 2021	Drawn by HR	Checked by -
Drawing No 191109-P-12	Rev -	Scale 1:250 @ A

DO NOT SCALE Use only figured dimensions



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ARBORICULTURAL METHOD STATEMENT

TREE WORKS

Only the tree works specified within this report may be undertaken, after the appropriate planning consents have been acquired and in order to implement the consent. In the event of any uncertainty regarding tree works, the arboriculturist will be consulted and where appropriate the Local Planning Authority.

All tree works will be undertaken, in accordance with the best-practice recommendations provided in BS 3998:2010. The statutory responsibilities as outlined in the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010 will also be complied with.

TREE PROTECTION FENCING

The tree protection fencing and (where appropriate) ground protection, will be installed as specified within this plan, prior to the commencement of any demolition and construction works. No plant or materials will be delivered to site prior to the construction of the tree protective fencing other than those required to install the tree protection fencing. On every third panel, a sign will be fixed that states "Tree Protection Zone (CEZ). Keep out. Any incursion into this area must be agreed in advance with the arboriculturist and Local Planning Authority." An example of this sign is provided within this plan.

The position of the tree protection fencing must not be amended and no individual panels will be uncoupled, without the agreement of the arboriculturist and/or Local Planning Authority.

SERVICES AND DRAINAGE

The installation of drainage runs, manholes, storage tanks, and utilities will be positioned outside the root protection areas (RPAs) of retained trees. If the installation of new services and drainage runs are required within the root protection areas (RPAs) of retained trees, all methods of working will follow the guidance within Table 3 of BS 5837 or the National Joint Utilities Group's (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees (volume 4, issue 2).

Excavation works within the RPAs of retained trees will be undertaken manually with the use of hand tools only (under the supervision of the arboriculturist), unless otherwise agreed in advance by the arboriculturist. It is recommended that an air lance - and if required a soil vacuum - is used, to excavate service trenches within RPAs. If soil conditions are not suitable for this method of excavation, alternative hand tools can be used once agreed in advance by the arboriculturist.

All roots greater than 25mm in diameter will be retained and will immediately be wrapped in hessian or another appropriate material, to prevent desiccation and temperature fluctuations. Roots will be pushed aside to allow for runs to be installed, where this is practical and without causing root damage.

No machinery will be permitted within the CEZ, at any time, unless agreed in advance with the arboriculturist.

ARBORICULTURAL CLERK OF WORKS

The monitoring of activities at the Site will occur, at the following points:

- To sign-off the tree protection measures;
- To sign-off the tree works;
- At other points as specified within this Report and the TPP.

It will be the responsibility of the main contractor (or other managing individual or organisation) to confirm the date and time of attendance, providing at least five working days of notice so that the project arboriculturist can confirm attendance.

GENERAL PROTECTION METHODS

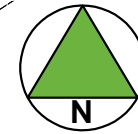
No fires will be permitted, within 20m of the crown of any tree or other area of vegetation that includes hedgerows and groups of trees.

No changes in soil level will occur, within the CEZs and RPAs, without agreement in advance with the arboriculturist.

The CEZs will at all times remain free of liquids, materials, vehicles, plant, and personnel, without agreement in advance with the arboriculturist.

Any liquid materials spilled on site will immediately be cleared up. If liquids are spilled within 2m of any CEZ or RPA, the incident will immediately be reported to the arboriculturist, to determine the appropriate response.

All damage to trees and other vegetation will immediately be reported to the arboriculturist, to determine the appropriate response.



The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

BS 5837:2012 TREE RETENTION CATEGORIES

- Category A**
Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B**
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- 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.
- Category U**
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
- BS5837 Root Protection Areas**
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.
- Position of barrier fencing and Construction Exclusion Zone.**
- Existing surfaces to be retained during construction, for the purposes of ground protection.** Following the completion of the construction of the dwellinghouse and outbuilding, if a new surface is specified then works will be limited only to replacing the existing surface layer. No excavations, beyond the existing sub-base, at any point, unless otherwise agreed with the arboriculturist in advance.
- Existing soil levels (i.e., those following the removal of existing structures and surfaces) to be retained.** No further reduction of levels at all, and no increase of levels in excess of 50mm, unless otherwise agreed with the arboriculturist in advance. Further detail relating to protection specifications to be confirmed by the arboriculturist, following the completion of RIBA Stage 4 landscape designs.

REV	DATE	DESCRIPTION	DRAWN
Base Drawing			
-	16.12.21	062-P-006-Proposed Site Plan	

Title Tree Protection for Construction		
Client Home owner of 179 Lambourne Road		
Project 179 Lambourne Road, Chigwell, Essex IG7 6.		
Date December 2021	Drawn by HR	Checked by -
Drawing No 191109-P-13	Rev -	Scale 1:250@A
DO NOT SCALE Use only figured dimensions		



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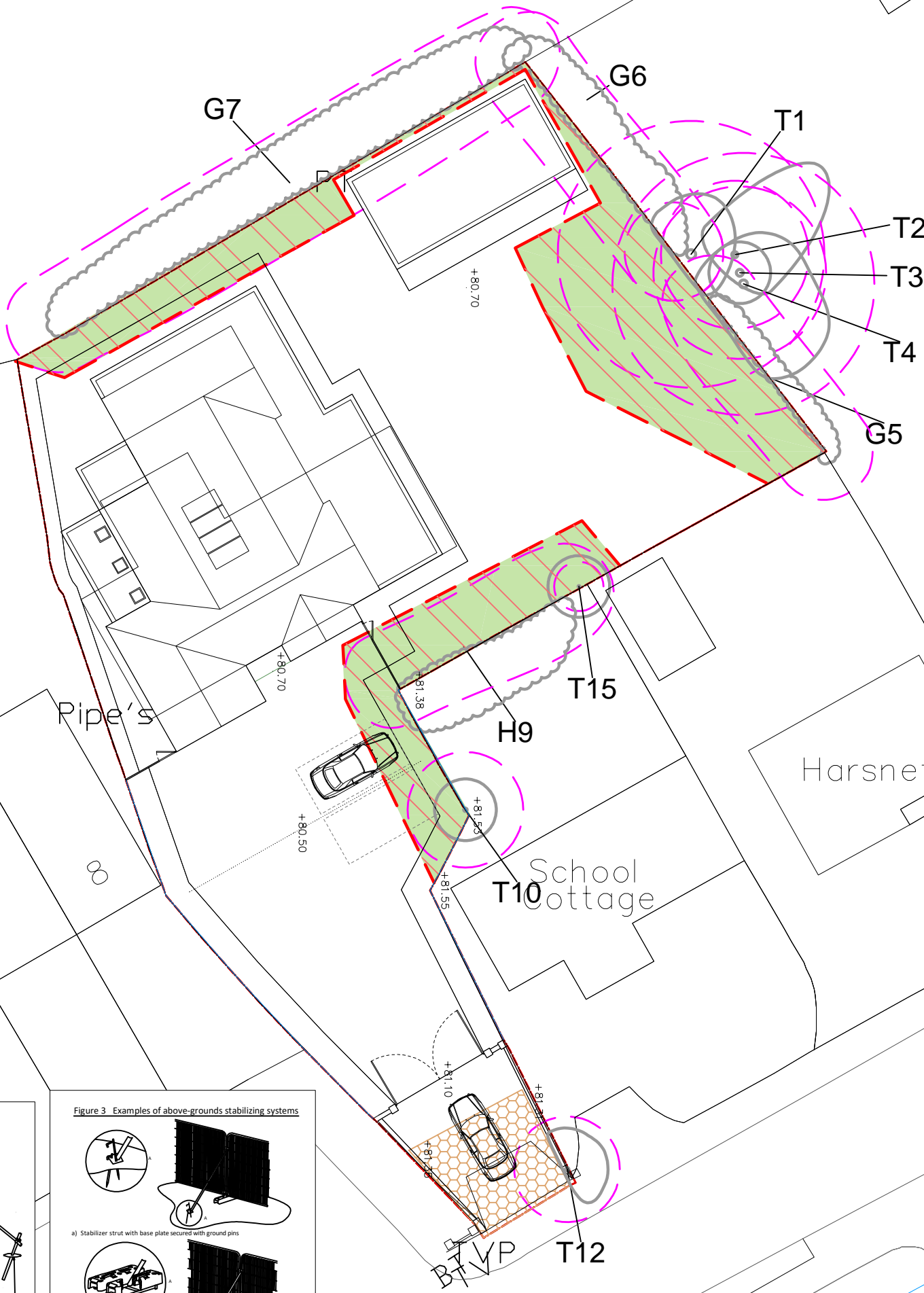
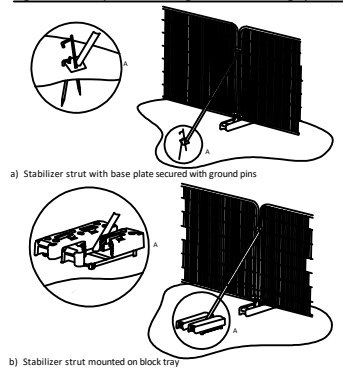
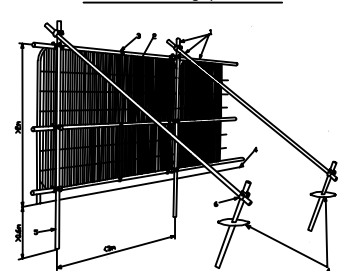


Figure 3. Examples of above-grounds stabilizing systems



Protective Fencing Specification



- Key
- 1 Standard scaffold poles.
 - 2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels.
 - 3 Panels secured to upright and cross-members with wire ties.
 - 4 Ground level.
 - 5 Uprights driven into the ground until secure (minimum depth 0.6m).
 - 6 Standard scaffold clamps.



**TREE PROTECTION
AREA
KEEP OUT!**

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE
AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL
CONSULTANT



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APPENDIX B - Schedules

- 191109-PD-10a Tree Schedule

191109-PD-10a Tree Schedule

191109 - 179 Lambourne Road

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
						N	NE	E	SE	S	SW	W	NW									
Tree T1	1	Fraxinus excelsior (Ash)	12.0	54 COM	2	3.0		2.0		2.5		2.5		4.0	3 W	Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Base / stems obscured - Structure. Base / stems obscured - Vegetation. Competition - Adjacent trees. Crown reduction - Recent. Form - Poor crown structure. Ivy or climbing plant. Unbalanced crown - Minor. Off-Site. Access not available to inspect.	09/12/2021	132.3	6.5	10-20	C2
Tree T2	1	Fraxinus excelsior (Ash)	16.0	30	1		6.0		2.5		1.0		2.0	7.0		Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Competition - Adjacent trees. Crown reduction - Recent. Form - Poor crown structure. Unbalanced crown - Minor. Off-Site. Access not available to inspect.	09/12/2021	40.7	3.6	10-20	C2
Tree T3	1	Fraxinus excelsior (Ash)	14.0	35	1	1.5		1.5		1.5		1.5		7.0		Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Competition - Adjacent trees. Crown reduction - Recent. Form - Poor crown structure. Unbalanced crown - Minor. Off-Site. Access not available to inspect.	09/12/2021	55.4	4.2	10-20	C2
Tree T4	1	Fraxinus excelsior (Ash)	14.0	53 COM	2		3.0		5.0		4.5		2.0	2.0	6.5 SW	Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Competition - Adjacent trees. Crown reduction - Recent. Form - Poor crown structure. Unbalanced crown - Minor. Off-Site. Access not available to inspect.	09/12/2021	127.8	6.4	10-20	C2
Group G5	10	x Cupressocyparis leylandii (Leyland Cypress)	6.5	20 AVE										2.0		Early Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Structure. Off-Site. Access not available to inspect. Dimensions indicative. Position estimated - no topographical survey information	09/12/2021			10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Generated By

191109 - 179 Lambourne Road

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
Group G6	10 x Cupressocyparis leylandii (Leyland Cypress)	6.5	20 AVE		N	NE	E	SE	S	SW	W	NW	2.0		Early Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Structure. Off-Site. Access not available to inspect. Dimensions indicative. Position estimated - no topographical survey information	09/12/2021			10-20	C2
Group G7	30 x Cupressocyparis leylandii (Leyland Cypress)	8.5	20 AVE										2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Arboricultural work - Recent. Base / stems obscured - Structure. Pruned laterally back to approximately the Site boundary. Off-Site. Access not available to inspect. Dimensions indicative. Position estimated - no topographical survey information	09/12/2021			10-20	C2
Hedge H8	15 Ligustrum ovalifolium (Privet/Garden Privet)	2.5	10 AVE										0.0		Early Mature	Structural condition Fair. Physiological condition Good. Hedgerow - Maintained. Dimensions estimated. Numbers indicative of group. Position estimated - no topographical survey information.	09/12/2021			10-20	C2
Hedge H9	1 Fraxinus excelsior (Ash) 15 x Cupressocyparis leylandii (Leyland Cypress)	6.0	20 AVE										2.0		Early Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Not possible. Arboricultural work - Recent. Base / stems obscured - Structure. Off-Site. Access not available to inspect. Dimensions indicative. Position estimated - no topographical survey information	09/12/2021			10-20	C2
Tree T10	1 Fraxinus excelsior (Ash)	4.0	23 COM	2	1.5	1.5	1.5	1.5					2.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Base / stems obscured - Structure. Crown reduction - Recent. Poor past pruning. Off-Site. Access not available to inspect. Position estimated - no topographical survey information.	09/12/2021	24.8	2.8	10-20	C2
Tree T11	1 Salix sp. (Willow sp.)	7.0	20	1	3.0	4.0	2.5	2.5					1.0		Early Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Multi-stemmed.	09/12/2021	18.1	2.4	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Generated By

MyTREES
tree management software

191109 - 179 Lambourne Road

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m ²)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T12	1 Salix sp. (Willow sp.)	3.5	21 COM	2	N	NE	E	SE	S	SW	W	NW	1.5		Early Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Recent. Decay / structural defect - Bole. Fork - Weak with included bark. Off-Site. Access not available to inspect. Position estimated - no topographical survey information.	09/12/2021	20.7	2.6	10-20	C2
Group G13		3.0											0.0		Semi Mature	Structural condition Fair. Physiological condition Good. Shrub border. Various genera including but not limited to Choicya, Ilex, and Rhododendron. Dimensions estimated. Numbers indicative of group. Position estimated - no topographical survey information.	09/12/2021			10-20	C2
Group G14		2.0											0.0		Semi Mature	Structural condition Fair. Physiological condition Good. Shrub border. Various genera including but not limited to Choicya, Cupressus, Ilex, Pyracantha, and Rhododendron. Dimensions estimated. Numbers indicative of group. Position estimated - no topographical survey information.	09/12/2021			10-20	C2
Tree T15	1 Fraxinus excelsior (Ash)	7.5	10	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0		Young	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Base / stems obscured - Structure. Form - Poor crown structure. Off-Site. Access not available to inspect. Position estimated - no topographical survey information.	09/12/2021	4.5	1.2	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
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	<ul style="list-style-type: none">* 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 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	RED		
	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	Tree 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).	GREEN
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.	BLUE
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.	GREY



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