

Arboricultural Impact Assessment and Method Statement

Milton Place Car Park

Gravesham

Kent

DA12 2PQ

Client: Gravesham Community Investment Partnership LLP

Site: Milton Place Car Park
Gravesham
Kent
DA12 2PQ

Report by: Tracy Clarke MICFor. F.Arbor.A. CEnv

Date: February 2025

Reference: TCTC-19152-B

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Executive Summary

1. Tracy Clarke Tree Consultancy Ltd are instructed to provide an arboricultural survey and impact assessment of the proposal in accordance with BS5837 (2012), Trees in relation to design, demolition, and construction – Recommendations. The information provided to the client has helped to inform the site layout to ensure that the proposal is sustainable in respect of important arboricultural and landscape features and that it complies with national and local planning policies.

2. **Description of Development**

   The proposal is for submission of full planning application for the erection of up to 76 new homes and associated infrastructure.

3. **Arboricultural Population**

   The survey includes forty nine individuals and four groups**.** Trees T46, T45, G44 and T43 are approved for removal as part of the approved highway improvements works to widen Ordnance Road from an earlier scheme. All trees are protected by virtue of being within the Riverside Conservation Area.

4. **Key Summary of Impacts**

   Nine individual trees (T52 is dead) and two groups are proposed for removal, these are low value trees either due to their condition, limited remaining useful life expectancy, or young age. T7 is proposed to be crown lifted the unhindered passage of large service vehicles under the tree.

5. **Key Mitigation**

   The landscape proposals include the planting of a ninety seven individual trees and others tree species within hedgerows throughout the site to compensate for losses.

6. **Further Arboricultural Input and Recommendations**

   Ensure there is a pre-start meeting with the demolition contractor and arboricultural consultant to agree tree protection measures and methods of work.

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1 Introduction

1.1 Tracy Clarke Tree Consultancy Ltd are instructed by Gravesham Community Investment Partnership to:

- provide a BS 5837 (2012) tree survey of trees relevant to the site, with recommendations for works, and
- provide an arboricultural impact assessment report and preliminary tree protection plan which addresses the impacts on trees from the proposed development for planning submission, and provides measures for their protection during construction

1.2 The proposal is for the submission of a full planning application for the erection of up to 76 new homes and associated infrastructure.

Method of assessment

1.3 This assessment follows best practice British Standard 5837: Trees in relation to design, demolition, and construction (2012) which provides a methodology for the assessment of trees and other significant vegetation on development sites and aims to guide decision making towards sustainable design and tree cover on all new developments.

1.4 This assessment also has regard to national and local planning policies in consideration of the arboricultural impacts from the development proposals since these policies will guide the decision-making process of the local planning authority.

Scope and limitations

1.5 The tree survey is of a preliminary nature only; all trees have only been inspected from ground level applying [1]Mattheck's (1994) visual tree assessment method (VTA). No detailed decay investigations of the trees or detailed site investigations have been carried out to inform this report.

1.6 This report is not an assessment of tree condition and the risk they represent to people or property, however where defects trees have been noted as requiring works, recommendations are included in the tree schedule included with this report.

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[1] Mattheck, C, Broeler, H. (1994). The body language of trees. A handbook for failure analysis – *Research for Amenity Trees* No.4 Research for Amenity Trees

1.7 All recommendations are given in the context of the site's current use, or to facilitate the proposed development. Trees are dynamic living organisms, and subject to a change in their condition.

1.8 This report should not be considered as a full assessment of the health and safety of trees on and adjacent to the site, and where trees do have the potential to harm people or property, an inspection of their condition by the relevant owner on an annual basis is recommended.

1.9 The assessment of trees within this report is valid for two years from its date.

2 Observations and Tree Information

The Site

2.1 The site was visited on 14 August 2024 to carry out a BS5837 (2012) survey and assessment of trees.



Fig. 1 Google Earth 2024 – site location

Tree data

2.2 Photographs of the site and trees can be found at Appendix A1

2.3 The data on the trees surveyed can be found in the tree schedule at Appendix A2.

2.4 The surveyed trees and their assessment of quality and value are indicated on the tree survey plan at Appendix B1.

2.5 A total of forty nine individual trees and four groups have been assessed, of these there are three poor, twenty nine low, and twenty one moderate quality and value trees. There are no high value trees present on or adjacent to the site and no trees identified as veteran or ancient.

2.6 The proposed layout and, where relevant, trees for removal are shown in Appendix B2. The proposed tree works are listed within the tree work schedule at Appendix A3.

2.7 The tree protection plan and heads of terms method statement is provided at Appendix B3.

2.8 An analysis of the tree quality and value, tree species mix and age diversity relevant to this proposal is included at Appendix C, which helps to understand the sustainability of the existing tree population on site.

Site soils and influence on rooting

2.9 Soil conditions will have a significant effect upon tree growth and will influence:

- The species that will grow successfully.
- Rooting depths for different species.
- The available soil volume that can be used by roots and therefore the likely tolerance of trees and other vegetation to soil disturbance

2.10 As a guide, [2]Cranfield University Soilscapes map describes the soils at the site as Soilscape 7: Freely draining slightly acid but base-rich soils.

2.11 This is a guide only, further detailed soil analysis on site will be required by the structural engineer to inform any foundation design detail.

Legal status of trees / woodlands

2.12 It is illegal to prune or remove a tree (including roots) with a Tree Preservation Order or one that is within a Conservation Area, without prior written authorisation from the Local Planning Authority unless removal is granted through detailed planning consent where the works have been clearly specified and agreed as necessary to implement that consent.

2.13 Gravesham Borough council have confirmed by email that there are no tree preservation orders on trees at the site, but that trees are by virtue of being within the Riverside Conservation Area.

Relevant Background Information

2.14 Highway improvement works to Ordnance Road considered as part of the Albion Waterside application (Ref:20210270) which has a resolution to grant planning permission and will result in the loss of surveyed trees T46, T45, G44 and T43, these are noted as such on the drawings supplied with this report.

[2] http://www.landis.org.uk

3 Planning Policy Context

National and Local Planning Policy

3.1 National Planning Policy Framework (NPPF) 2024 reflects the Government's vision for a planning system that puts beautiful, environmentally sustainable, and life-enhancing places at its heart. The NPPF recognises that the natural environment is an essential component of the health and wellbeing of society, and in achieving well designed places.

3.2 **Paragraph 136:** 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, that appropriate measures are in place to secure long – term maintenance of newly planted trees, and that existing trees are retained wherever possible.

3.3 **Paragraph 164 a):** advises that new development should be planned for in ways that avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaption measures, including through the planning of green infrastructure.

3.4 **Paragraph 187 b):** Planning policies and decisions should contribute to and enhance the natural and local environment by recognizing the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic benefits of the best and most versatile agricultural land, and of trees and woodland.

3.5 **Paragraph 193 a) and c):** when determining planning applications, local planning authorities should apply the principles of avoidance, minimise, remediate or, as a last resort compensate for the harmful impacts of development on for example biodiversity, and irreplaceable habits (such as ancient woodland and ancient and veteran trees).

3.6 Growth for communities delivered by the planning system requires the careful consideration of our natural environment during the design and development process to achieve sustainable development and this report considers how the development complies with the NPPF and how it achieves sustainable development.

3.7 Local Planning Authorities are governed in their decision-making process by the principle of sustainable development.

3.8 The relevant planning policy of Gravesham Borough Council is the Gravesham Local Plan Core Strategy September 2014:

3.9 **Policy CS01: Sustainable Development** - will favour sustainable development.

3.10 **Policy CS12: Green Infrastructure** - aims to protect and enhance the borough's green infrastructure network.

3.11 **Policy CS19: Development and Design Principles** - new development will be visually attractive, conserve and enhance the character of the local, built, historic and natural environment, protect and enhance the Borough's green infrastructure network.

4 Discussion

Key arboricultural impacts

4.1 The following arboricultural impacts have been identified in relation to the proposed development:

<table>
<tr><th>Activity</th><th>Potential Impact</th></tr>
<tr><td>Tree Loss for Development</td><td>
<table>
<tr><th>Category A</th><th>Category B</th><th>Category C</th><th>Category U</th></tr>
<tr><td>0</td><td>0</td><td>T36, T37, T38 T39, T40, T41, G42, T50, G51, T52</td><td>T52</td></tr>
</table>

The proposal will require the loss of nine individual low and poor value trees and two groups. T52 is dead.
</td></tr>
<tr><td>[3]RPA incursion: Demolition</td><td>Provided the tree protection plan is used as a guide for demolition operations, this should ensure that any works will not harm retained trees.

Retaining the existing hard surfacing within the RPA of T48 until completion of the development will ensure that any roots here can be protected from compaction during construction operations.

It will be necessary to have a pre-start meeting with the demolition contractor prior to their work commencing on site so that they understand and agree methods of tree protection and works around trees with the arboricultural consultant.</td></tr>
<tr><td>RPA incursion: Construction</td><td>Construction operations are generally outside the RPA of retained trees and provided the tree protection plan and method statement at Appendix B3 is used as a guide for construction operations, this should ensure that any works will not harm retained trees.

It is recommended that the tree protection issues are referenced and properly acknowledged within a construction management plan.</td></tr>
<tr><td>RPA Incursion: Soil levels change</td><td>No soil level changes are anticipated within the root protection area of retained trees.</td></tr>
</table>

[3] RPA Section 3.7 of BS5837 (2012): 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

RPA Incursion: Underground services and drainage	It should be possible to locate the utilities outside the RPA of trees. If it is essential to locate underground drainage or services runs within the RPAs of retained trees these operations should follow the recommendations in the NJUG guidelines[4]. In addition, it is also recommended that these works are carried out under arboricultural supervision when being installed.
RPA Incursion Landscape operations	Provided the tree protection plan is used as a guide for landscape operations, this should ensure that any works for improving the hard and soft landscaping features will not harm trees. Any landscaping works within the tree protection areas should be undertaken by hand only avoiding using machinery. Where machinery is unavoidable this should be tracked and light weight only (max of 2 tonnes). Temporary ground protection should always be installed beforehand as follows: • *Pedestrian* – single thickness scaffold boards placed on top of a compressible resistant layer of 100mm of woodchip laid onto a geotextile membrane • *Pedestrian operated plant* – gross weight of 2tonne, proprietary inter-linked ground protection boards placed on top of a compressible resistant layer of 150mm of woodchip laid onto a geotextile membrane • For wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs to an engineering specification designed in conjunction with arboricultural advice to accommodate the likely loading to which it will be subjected)
Pruning to facilitate development	Minor crown lifting of the eastern extents of T7 is proposed to give adequate clearance for service lorries. This is limited to minor / secondary branch growth and will not be harmful to the long term health of the tree.
Future growth of retained trees	This is not considered to be an issue as the layout is well designed away from trees and tree crowns.
Daylight and sunlight	This is not considered to be an issue as the layout is well designed away from trees and tree crowns. Trees are an asset when it comes to the provision of shade and welcome cooling and can provide a natural alternative to the reliance on air conditioning (for example) to mitigate the effects of climate change resulting in warmer temperatures generally in the UK.

Sustainability and Compliance with planning policy

Policy	How the scheme complies
Policy CS01: Sustainable Development Policy CS12: Green Infrastructure	Whilst the loss of low value or poor value trees is necessary to deliver the scheme, the high quality

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

Policy CS19: Development and Design Principles	design of the built form together with the carefully considered landscape setting including the provision of ninety seven individual trees and others tree species within hedgerows throughout the site ensures that the proposal is sustainable, visually attractive, and is one that makes a positive contribution to the borough's green infrastructure network for the long term. The proposal therefore demonstrates compliance with national and local planning policies relevant to arboricultural features.

5 Conclusions

5.1 This report demonstrates that trees have been considered properly in accordance with best practice, impacts identified, and mitigation suggested to ensure risks from demolition and construction operations associated with the proposal can be reasonably managed and implemented where necessary.

5.2 The arboricultural assessment includes a total of forty nine individual trees and four groups of these are three poor, twenty nine low, and twenty one moderate quality and value trees. No high value trees are present on or adjacent to the site and no trees identified as veteran or ancient.

5.3 There will be the loss of nine individual trees (T52 is dead) and two groups to facilitate the development proposal, these are considered low value trees either due to their condition, inappropriate location, limited remaining useful life expectancy, or young age.

5.4 The landscape proposal delivers the planting of ninety seven individual trees and others tree species within hedgerows throughout the site to provide a high quality soft landscape setting for a high quality development, these new additions will help to integrate the built form onto the site, and together with the retention of important existing sustainable trees on and around the site, will positively enhance the existing local landscape character of the site.

5.5 Provided the approaches and further recommendations within this report are followed, the proposal can incorporate retained trees sustainably and mitigate appropriately for any proposed losses and therefore demonstrate compliance with the relevant planning policies.

Appendix A1 – Photographs



TC1. (14.08.24) looking north, T3-T7 retained along the northern boundary of the park



TC2. (14.08.24) looking northeast, T9-T34 retained along the northern boundary of the park



TC3. (14.08.24) – T41 Lombardy poplar to be removed



TC4 . (14.08.24) G42 (sycamores) looking west – to be removed



TC5. (14.08.24) T49, T48, T47 looking west, to be retained along western boundary



TC6. (14.08.24) looking west, T50, G51 and T52 to be removed



TC7. (14.08.24) looking west, T52 and T53 to be removed

Appendix A2 – BS 5837 Tree Data Schedule

TCTC-19152 Tree schedule (BS5837)

Milton Place

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T1	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	8.0	15	1	2.2		2.2		2.2		2.3		2.5		Semi Mature	Structural condition Good. Physiological condition Good. No significant faults observed. Tree with potential but currently easily replaceable	14/08/2024	10.2	1.8	40+	C1
Tree T2	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	8.0	20	1	2.2		3.0		2.5		2.3		2.2		Early Mature	Structural condition Good. Physiological condition Good. No significant faults observed. Tree with potential Broken branch minor to west	14/08/2024	18.1	2.4	20-40	B1
Tree T3	1	Acer platanoides (Norway Maple)	14.0	44	1	5.5		3.7		6.8		4.0		4.5		Mature	Structural condition Fair. Physiological condition Good. Deadwood - Minor. Epicormic growth - Bole / principal stems. Pruning wounds - Decayed. Pruning wounds - Historic. Value is in being part of a group. As an individual of fair form only, suppressed crown shape and historic heavy crown reduction, possible topping with younger regrowth (100mm diameter) forming canopy Pruned back to clear light column to west Canopy height over cark park given, over footpath is 2.5m agl C1 individual	14/08/2024	87.6	5.3	20-40	B2

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

Milton Place

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T4	1	Acer platanoides (Norway Maple)	17.0	55	1	6.7		2.7		8.3		5.7		7.5		Mature	Structural condition Fair. Physiological condition Good. Decay / structural defect in crown limb / limbs - Open cavity / cavities. Deadwood - Minor. Pruning wounds - Decayed. Root damage - Mower. Suppressed crown - Major. Value is in being part of a group. Canopy height over cark park given Lower leafy canopy formed by epicormic stem growth 2.5m agl Lower branches reduced or removed over car park with decaying stubs and sucker growth Weeping pruning wound on main northern leader at 3.5m agl, decayed, cavity above this area, suspect coalesced decay in leader	14/08/2024	136.8	6.6	20-40	**B2**
Tree T5	1	Acer platanoides (Norway Maple)	16.0	48	1	6.6		3.8		7.0		6.4		7.0		Mature	Structural condition Fair. Physiological condition Good. Deadwood - Major. Deadwood - Minor. Pruning wounds - Decayed. Root damage - Mower. Suppressed crown - Major. Value is in being part of a group. Canopy height over cark park given Lower leafy canopy formed by epicormic stem growth 2.2m agl Branches reduced over car park, occasional large pruning wound	14/08/2024	104.2	5.8	20-40	**B2**
Tree T6	1	Acer pseudoplatanus (Sycamore)	23.0	110	1	10.0		8.5		11.0		10.0		8.0		Mature	Structural condition Good. Physiological condition Good. Arboricultural work - Historic. Canopy height given over car park Main leader missing / removed at bole, with decayed stub Large decaying pruning wound at the base of large leader to south at 3m agl	14/08/2024	547.4	13.2	20-40	**B1/B2**

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.

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Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T7	1	Acer platanoides (Norway Maple)	17.0	68	1	6.6		6.5		6.4		6.0		3.5		Mature	Structural condition Fair. Physiological condition Good. Deadwood - Minor. Suppressed crown - Major. Value is in being part of a group. Canopy height over cark park given Broken minor branch to west Branch reduced over car park, large decaying pruning wound	14/08/2024	209.2	8.2	20-40	B2
Group G8	3	Aesculus hippocastanum (Horse Chestnut)	9.0	37 AVE	1					6.0				2.3		Early Mature	Structural condition Fair. Physiological condition Good. Bacterial cankering on main stems with cracking and loosebark, exudations, staining Diameter given for largest stem	14/08/2024	61.9	4.4	10-20	C2
Tree T9	1	Acer platanoides (Norway Maple)	20.0	81	1	7.0		9.0		13.0		7.8		2.5		Mature	Structural condition Good. Physiological condition Poor. Die-back - Throughout crown. Die-back - Upper crown. Deadwood - Minor. Root decay - Evident / observed. Root damage - Mower. Over extended lateral branch to south Although large, prominent tree, visibly declining in health	14/08/2024	296.8	9.7	10-20	C1/C2
Tree T10	1	Aesculus hippocastanum (Horse Chestnut)	9.0	22	1	2.8		3.0		3.3		2.8		1.5		Early Mature	Structural condition Poor. Physiological condition Poor. Die-back - Throughout crown. Noticeably in decline, active bacterial canker, yellowing and small leaves, thin canopy	14/08/2024	21.9	2.6	0-10	U
Tree T11	1	Aesculus hippocastanum (Horse Chestnut)	9.0	27	1	2.8		4.3		3.6		3.6		1.5		Early Mature	Structural condition Fair. Physiological condition Fair. Suppressed crown - Minor. Active bacterial canker evident, loose bark, exudations Small basal wound to south	14/08/2024	33.0	3.2	10-20	C1
Tree T12	1	Aesculus hippocastanum (Horse Chestnut)	7.0	25	1	2.3		4.4		4.6		3.6		1.2		Early Mature	Structural condition Fair. Physiological condition Good. Branch - Broken. Decay / structural defect in crown limb / limbs - Localised. Suppressed crown - Major. Active bacterial canker evident, loose bark, exudations	14/08/2024	28.3	3.0	10-20	C1

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.

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Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T13	1	Acer pseudoplatanus (Sycamore)	18.0	60	1	6.0		5.2		6.8		7.0		2.5		Mature	Structural condition Good. Physiological condition Good. Suppressed crown - Minor. Small bark wound at base to North	14/08/2024	162.9	7.2	20-40	B2
Tree T14	1	Acer pseudoplatanus (Sycamore)	19.0	63	1	9.0		4.0		7.5		7.5		6.2		Mature	Structural condition Good. Physiological condition Good. Suppressed crown - Minor.	14/08/2024	179.6	7.6	20-40	B2
Tree T15	1	Acer pseudoplatanus (Sycamore)	20.0	82	1	10.0		7.5		7.5		7.0		3.5		Mature	Structural condition Good. Physiological condition Good. Deadwood - Minor. Suppressed crown - Minor. Small / young fungal fruiting body (Ganoderma sp) developing at base to north, missing bark, soft wood in area probed at base of stem Detailed investigation - Internal decay assessment. Around lower stem Further recommendations dependent on findings	14/08/2024	304.2	9.8	20-40	B2
Tree T16	1	Acer pseudoplatanus (Sycamore)	16.0	49	1	8.0		4.0		6.5		3.0		7.0		Mature	Structural condition Fair. Physiological condition Fair. Pruning wounds - Decayed. Suppressed crown - Major. Wound in main stem with open cavity to East at 0.3-0.5m agl, solid when probed	14/08/2024	108.6	5.9	20-40	B2
Tree T17	1	Acer platanoides (Norway Maple)	16.0	43	1	6.5		5.0		8.0		5.6		2.5		Mature	Structural condition Good. Physiological condition Good. Pruning wounds - Decayed. Suppressed crown - Minor.	14/08/2024	83.6	5.2	20-40	B2
Tree T18	1	Acer pseudoplatanus (Sycamore)	20.0	74	1	9.3		4.5		8.2		5.5		6.5		Mature	Structural condition Good. Physiological condition Fair. Deadwood - Minor. Suppressed crown - Minor. Decline suspected, canopy thinning, scattered dead twigs through the crown Bat box 5m agl	14/08/2024	247.7	8.9	20-40	B2
Tree T19	1	Acer pseudoplatanus (Sycamore)	19.0	74	1	7.6		5.8		9.0		3.8		6.0		Mature	Structural condition Good. Physiological condition Fair. Pruning wounds - Decayed. Suppressed crown - Minor. Decline suspected, scattered dead twigs, occasional larger branch throughout the crown	14/08/2024	247.7	8.9	20-40	B2

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.

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Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T20	1	Acer pseudoplatanus (Sycamore)	20.0	78	1	10.0		5.1		10.0		7.0		7.0		Mature	Structural condition Good. Physiological condition Good. Decay / structural defect in crown limb / limbs - Localised. Suppressed crown - Minor.	14/08/2024	275.2	9.4	20-40	B2
Tree T21	1	Acer pseudoplatanus (Sycamore)	22.0	82	1	10.0		9.5		8.7		5.7		8.0		Mature	Structural condition Good. Physiological condition Good. Deadwood - Minor. Dried out fungal toadstool bodies between two buttress roots to west	14/08/2024	304.2	9.8	20-40	B2
Tree T22	1	Acer pseudoplatanus (Sycamore)	18.0	59	1	7.5		6.7		5.8		2.0		4.5		Mature	Structural condition Poor. Physiological condition Fair. Deadwood - Minor. Suppressed crown - Major. Cavity in main stem at 2.5m from old branch wound, holding majority of crown weight over park area Detailed investigation - Climbing inspection. Check extent of decay in stem at cavity Further recommendations dependent on findings	14/08/2024	157.5	7.1	10-20	C1
Tree T23	1	Aesculus hippocastanum (Horse Chestnut)	14.0	43	1	7.0		6.5		6.0		5.5		2.0		Early Mature	Structural condition Poor. Physiological condition Good. Active bacterial canker, stem exudations, extensive bark exudations on main stem, cracking loose bark on stem and branches	14/08/2024	83.6	5.2	10-20	C1
Tree T24	1	Acer pseudoplatanus (Sycamore)	23.0	104	1	11.0		10.0		9.0		7.0		6.0		Mature	Structural condition Good. Physiological condition Poor. Die-back - Throughout crown. Deadwood - Major. Deadwood - Minor. Bat box at 5m agl Decline observed, scattered dieback in canopy, particularly to north	14/08/2024	489.3	12.5	10-20	C1
Tree T25	1	Tilia x vulgaris (Common Lime)	13.0	55	1	6.0		5.7		5.0		4.7		0.5		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Epicormic growth - Base. Adds to general greening but not significant individual in arboricultural terms Cankering and swelling of main stem at 1.2m agl C1 individual	14/08/2024	136.8	6.6	20-40	B2

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

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T26	1	Sophora japonica (Japanese Pagoda Tree)	19.0	100	1	9.0		12.0		12.0		11.5		0.5		Late Mature	Structural condition Fair. Physiological condition Poor. Arboricultural work - Historic. Die-back - Throughout crown. Deadwood - Minor. Pruning wounds - Decayed. Woodpecker holes. Unusual / uncommon tree, but in decline	14/08/2024	452.4	12.0	10-20	C1
Tree T27	1	Robinia pseudoacacia (False Acacia sp./Black Locust)	10.0	108 COM	2	6.0		5.5		5.0		2.3		4.0		Post Mature	Structural condition Poor. Physiological condition Good. Decay / structural defect - Open cavity / cavities. Decay / structural defect - Principal stems. Topped at 4m with younger regrowth Interesting stem / bolling Veteran features, hollow stems	14/08/2024	533.3	13.0	20-40	B3
Tree T28	1	Aesculus hippocastanum (Horse Chestnut)	8.0	26	1	3.3		3.0		2.5		4.0		2.0		Early Mature	Structural condition Poor. Physiological condition Poor. Die-back - Throughout crown. Noticeably in decline, active bacterial canker, yellowing and small leaves, thin canopy	14/08/2024	30.6	3.1	0-10	U
Tree T29	1	Aesculus hippocastanum (Horse Chestnut)	11.0	32	1	3.3		5.0		4.6		4.0		0.5		Early Mature	Structural condition Fair. Physiological condition Good. Epicormic growth - Base / bole / principal stems. Suppressed crown - Minor. Active bacterial canker, exudations Loose, missing bark on main stem	14/08/2024	46.3	3.8	10-20	C1
Tree T30	1	Acer platanoides (Norway Maple)	19.0	68	1	4.0		6.0		6.0		6.0		3.0		Mature	Structural condition Good. Physiological condition Good. Deadwood - Major. Root damage - Mower. Suppressed crown - Minor.	14/08/2024	209.2	8.2	20-40	B1/B2
Tree T31	1	Aesculus hippocastanum (Horse Chestnut)	11.0	31	1	3.0		4.5		5.5		3.6		0.5		Early Mature	Structural condition Poor. Physiological condition Good. Epicormic growth - Base / bole / principal stems. Suppressed crown - Minor. Active bacterial canker, exudations Loose, missing bark on main stem	14/08/2024	43.5	3.7	10-20	C1
Tree T32	1	Aesculus hippocastanum (Horse Chestnut)	12.0	31	1	2.8		4.5		6.4		4.8		0.5		Early Mature	Structural condition Poor. Physiological condition Good. Unbalanced crown - Major. Active bacterial canker, exudations Loose, missing bark on main stem	14/08/2024	43.5	3.7	10-20	C1

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

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T33	1	Acer sp. (Maple sp.)	9.0	18	1	2.9		3.5		3.5		2.7		3.0		Semi Mature	Structural condition Good. Physiological condition Good. Good long term potential but currently easily replaceable Minor stem damage	14/08/2024	14.7	2.2	40+	C1
Tree T34	1	Acer platanoides (Norway Maple)	9.0	21	1	3.6		3.7		3.0		2.7		4.0		Semi Mature	Structural condition Poor. Physiological condition Good. Poor crown form with weak forks Stem damage	14/08/2024	20.0	2.5	20-40	C1
Tree T35	1	Acer platanoides (Norway Maple)	7.0	16	1	3.0		3.5		2.6		1.6		3.0		Semi Mature	Structural condition Good. Physiological condition Good. Good long term potential but currently easily replaceable Minor stem damage	14/08/2024	11.6	1.9	40+	C1
Tree T36	1	Acer platanoides (Norway Maple)	8.0	17	1	3.5		2.7		3.3		2.8		2.0		Semi Mature	Structural condition Poor. Physiological condition Good. Major bark wound / stem damage, almost full circumference ofbark removed	14/08/2024	13.1	2.0	10-20	C1
Tree T37	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	5.0	12	1	1.1		1.1		1.1		1.1		0.3		Semi Mature	Structural condition Good. Physiological condition Good. No clear stem	14/08/2024	6.5	1.4	40+	C1
Tree T38	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	5.0	10	1	1.0		1.0		1.6		1.7		0.3		Semi Mature	Structural condition Fair. Physiological condition Fair. Epicormic growth - Base. No clear stem Some foliage browning and death	14/08/2024	4.5	1.2	40+	C1
Tree T39	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	4.0	8 COM	3	1.2		1.2		1.2		1.2		0.3		Semi Mature	Structural condition Poor. Physiological condition Fair. Multi stemmed from base with weak forks Small leaves	14/08/2024	3.4	1.0	10-20	C1
Tree T40	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	4.0	9	1	1.1		1.1		1.1		1.1		0.3		Semi Mature	Structural condition Fair. Physiological condition Fair. Epicormic growth - Base. Multi stemmed from base with weak forks	14/08/2024	3.7	1.1	20-40	C1

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

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T41		Populus nigra 'Italica' (Lomardy Poplar)	28.0	146 COM	6	5.6		5.4		5.0		4.0		1.5		Post Mature	Structural condition Poor. Physiological condition Good. Access to inspect base - Restricted / obscured. Epicormic growth - Base. Prominent feature but poor structure including multiple mature stems from base with tight forks and included bark Area of canopy dieback to North at roughly 20m agl Does not fit into moderate value category due to limited remaining future contribution <20 years Buttress roots to west lifting tarmac	14/08/2024	706.9	15.0	10-20	C1
Group G42	1	Acer pseudoplatanus (Sycamore)	18.0	51 COM	3	6.0		6.0		6.0		6.0		2.5		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Base / stems obscured - Debris. Base / stems obscured - Vegetation. Multi stemmed from base, some stems growing through mesh fencing. Generally poor structural quality Adds to general landscape greening but not high quality Diameter given for largest stem Numbers in group not counted	14/08/2024	122.1	6.2	10-20	C2
Tree T43	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	9.0	35	1	4.0		4.0		4.0		4.0		3.0		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Remove debris / vegetation to allow inspection of base. Further recommendations dependent on findings	14/08/2024	55.4	4.2	20-40	B2
Group G44	1 1	Sorbus aucuparia (Rowan/Mountain Ash) Tilia x vulgaris (Common Lime)	8.0	25 AVE	1	3.0		3.0		3.0		3.0		2.5		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Sorbus in decline with dieback observed (mature) Adds to general landscape greening Diameter given for largest stem	14/08/2024	28.3	3.0	10-20	C2
Tree T45	1	Pyrus calleryana 'Chanticleer' (Ornamental Pear)	12.0	37	1	3.5		4.0		4.5		3.3		2.5		Mature	Structural condition Good. Physiological condition Fair. Deadwood - Minor. Boundary tree, visually prominent Dieback internal crown	14/08/2024	61.9	4.4	20-40	B2

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

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T46	1	Populus alba (White Poplar/Abele)	23.0	77	1	9.0		6.0		9.0		7.0		4.0		Mature	Structural condition Good. Physiological condition Fair. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Deadwood - Minor. Visually prominent on boundary, but limited remaining contribution Hornet clearwing exit holes around base of stem - potential for associated internal decay Remove debris / vegetation to allow inspection of base. Further recommendations dependent on findings	14/08/2024	268.2	9.2	10-20	C1/C2
Tree T47	1	Alnus cordata (Italian Alder)	16.0	35	1	2.0		4.0		5.0		4.0		0.5		Early Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Suppressed crown - Minor. Visually prominent on boundary Remove debris / vegetation to allow inspection of base. Further recommendations dependent on findings	14/08/2024	55.4	4.2	20-40	B1/B2
Tree T48	1	Populus alba (White Poplar/Abele)	20.0	55	1	4.5		4.0		9.0		5.0		8.0		Mature	Structural condition Good. Physiological condition Fair. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Deadwood - Minor. Visually prominent on boundary, but limited remaining contribution Lower crown dieback to east Branches over path to west have been shortened Remove debris / vegetation to allow inspection of base. Further recommendations dependent on findings	14/08/2024	136.8	6.6	10-20	C1/C2
Tree T49	1	Tilia x vulgaris (Common Lime)	8.0	24	1	3.0		3.0		3.0		3.0		0.0		Early Mature	Structural condition Good. Physiological condition Good. Adds to general greening but not significant in landscape value terms	14/08/2024	26.1	2.9	20-40	C1/C2
Tree T50	1	Populus alba (White Poplar/Abele)	22.0	75	1	7.5		6.0		6.0		7.8		4.0		Mature	Structural condition Good. Physiological condition Fair. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Visually prominent on boundary Branches pruned back from footpath Remove debris / vegetation to allow inspection of base. Further recommendations dependent on findings	14/08/2024	254.5	9.0	10-20	C1/C2
Group G51	2	Tilia x vulgaris (Common Lime)	9.0	25 AVE	1	3.0		3.0		3.0		3.0		3.0		Early Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Adds to general landscape greening	14/08/2024	28.3	3.0	20-40	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

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes / Recommendations	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T52	1	Populus alba (White Poplar/Abele)	11.0	25	1	1.5		1.0		1.0		1.0		3.0		Early Mature	Structural condition Poor. Physiological condition Dead. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Dead tree / trees.	14/08/2024	28.3	3.0	0-10	U
Tree T53	1	Prunus cerasifera (Cherry Plum (Myrobalan))	6.0	22	1	2.2		2.8		2.0		2.2		1.0		Early Mature	Structural condition Fair. Physiological condition Good. Unremarkable tree	14/08/2024	21.9	2.6	20-40	C1

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

Table 1 of BS5837 (2012) **Cascade chart for tree quality assessment**

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	* 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 arboricutural 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**

Appendix A3 – Tree Work Schedule

Tree Work Schedule

TRACY CLARKE TREE CONSULTANCY

Site: Milton Place Car Park

Date: November 2024

Tree / Group No.	Species	BS Category	Life Stage	Recommended works
Proposed Removals				
T36	Norway maple	C1	Semi mature	Remove to facilitate the development proposal
T37	Ornamental pear	C1	Semi mature	Remove to facilitate the development proposal (drainage)
T38	Ornamental pear	C1	Semi mature	Remove to facilitate the development proposal (drainage)
T39	Ornamental pear	C1	Semi mature	Remove to facilitate the development proposal
T40	Ornamental pear	C1	Semi mature	Remove to facilitate the development proposal
T41	Lombardy poplar	C1	Post mature	Remove to facilitate the development proposal
G42	Sycamore	C2	Mature	Remove to facilitate the development proposal
T50	White poplar	C1/C2	Mature	Remove to facilitate the development proposal
G51	Lime	C2	Early mature	Remove to facilitate the development proposal
T52	White poplar	U	Early mature	Remove for arboricultural reasons
T53	Cherry plum	C1	Early mature	Remove to facilitate the development proposal
TOTAL				
Proposed Pruning				
T7				Crown lift minor pendulous growth only, eastern extents to give 5m clearance above ground level for large service lorries and vehicles

NOTE:

All tree works should comply with BS 3998 (2010) - Recommendations. If necessary, appropriate checks by a suitably qualified ecologist should be made before tree works are undertaken, and all works should only be carried out once planning permission has been granted and any pre-commencement planning conditions relating to tree work have been discharged. Where feasible and there is no risk of spreading diseases or pathogens, consider re-using timber from felled trees on site for creation of ecological habitat piles, furniture or woodchips for landscaping works, this re-use will help to maintain / lock carbon storage achieved from the growing

Appendix B1 – Tree Survey Plan



BS5837:2012 Tree Categorisation

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

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

C Category
Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

U Category
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

Key

Root Protection Area (RPA)
The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees viability. Where the tree is ancient the RPA follows Natural England Standing Advice 2022.

Do not scale from this drawing, tree positions and dimensions should always be checked on site. The original of this drawing is in colour, do not rely on monochrome versions. This drawing is copyright Tracy Clarke Tree Consultancy Ltd. ©

0 5m 10m 20m 30m 40m 50m

Date	Revision	Description
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----	----	----
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Title
Tree Survey

Client
Hill Residential Ltd

Site
Milton Place Car Park, Gravesham, Kent, DA12 2PQ

Ref: TCTC-19152-PL-01	**Rev:** -	**Scale:** 1:500 @ A1
Status: Planning	**Date:** Aug-2024	**Drawn By:** KM

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TREE CONSULTANCY
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Appendix B2 – Proposal and Tree Work Plan

North

1B2P
1B2P M4(3)
2B4P_Galloway
3B5P_Kings
3B5P_Lewis
3B6P_Abney
3B6P_Walbury
Cleaners St.
Cycle Store 1
Cycle Store 2
Entrance
Mech Smoke Shaft
Natural Smoke Shaft
Plant
Refuse
Riser 1
Riser 2
Riser 3
Riser 4
Stair 1
Stair 2
Wardens Room

84 spaces

BS5837:2012 Tree Categorisation

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

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

C Category
Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

U Category
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

Key

Root Protection Area (RPA)
The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees viability. Where the tree is ancient the RPA follows Natural England Standing Advice 2022.

Trees to be removed / pruned for development

Trees proposed for removal for arboricultural reasons

Trees to be removed within consented Albion Waterside application which includes approved works to widen Ordnance Road

Do not scale from this drawing, tree positions and dimensions should always be checked on site. The original of this drawing is in colour, do not rely on monochrome versions. This drawing is copyright Tracy Clarke Tree Consultancy Ltd.©

0 5m 10m 20m 30m 40m 50m

Date	Revision	Description
	---	----

Title
Proposed Layout

Client
Gravesham Community Investment Partnership

Site
Milton Place Car Park, Gravesham, Kent, DA12 2PQ

Ref: TCTC-19152-PL-02	**Rev:** -	**Scale:** 1:500 @ A1
Status: Planning	**Date:** Nov 2024	**Drawn By:** KM

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Appendix B3 – Tree Protection Plan and Heads of Terms Method Statement

ARBORICULTURAL METHOD STATEMENT (HEADS OF TERMS)

Tree works
All tree works recommended with the proposal will be carried out in accordance with BS 3998:2010 *Tree work - Recommendations* prior to any construction machinery arriving on site. Once completed, installation of protective barriers and temporary ground protection will take place immediately.

Protective Barriers
Protective barriers will be installed in the locations specified on this drawing prior to any works starting on site. There are two types of fencing specified; the default fencing which is required for areas of highest demolition and construction intensity and risk to trees, and the above ground stabilising system for less intensively used areas of the site.

Temporary Ground Protection
Where specified, temporary ground protection will be installed in accordance with this drawing. The intention is to protect roots and soil from potential compaction damage where the installation of a barrier would be impractical for demolition and construction activities. The specification will be suitable to withstand the vehicle or pedestrian loads to be used in these areas as follows:

Pedestrian use only:
Ground protection to consist of single thickness scaffold boards placed on top of a compressible resistant layer of 100mm of woodchip laid onto a geotextile membrane.

Pedestrian operated plant - Machinery gross weight limited to 2 tonne.
Ground protection to consist of proprietary interlinked ground protection boards placed on top of a compressible resistant layer of 150mm of woodchip laid onto a geotextile membrane.

Wheeled or tracked construction traffic exceeding 2 tonne gross weight
Ground protection to consist of proprietary linked mat systems or pre-cast reinforced concrete slabs to an engineering specification designed in conjunction with arboricultural advice to accomodate the likely load to which it will be subjected to.

Contractor Set Up and Working Space and Operational Methods
Before works start on site, if not already available, the contractor responsible for all demolition and construction operations will provide a Construction Environmental Plan (CEMP) or similar which indicates the proposed site compound, welfare facilities, traffic routes, and storage of materials for review and agreement by the appointed arboricultural consultant. The CEMP will be amended as required and incorporated into the site tree protection plans by the appointed arboricultural consultant and re-circulated for site use.

Method Statement for Post Holes Excavations
All excavations for postholes within RPAs or CEZs will be carried out manually using appropriate hand tools or using an air spade to remove soil and expose tree roots, outer bark of roots must remain intact.

Prior to starting, the location of the proposed holes will be marked out on site for clarification and to prevent unnecessary overspill of site activities beyond the expected operational area.

No posts will be driven into the ground where they are within 2.5m of the stem of a mature tree, posts will be repositioned and alternative methods for supporting the panel in these locations will be agreed with the arboricultural consultant.

During hand excavation works for post holes all roots greater than 25mm in diameter and where feasible clumps of fibrous roots will be retained and wrapped in Hessian during the works to prevent desiccation, this will be kept damp for the duration.

Roots encountered less than 25mm in diameter will be pruned where necessary to complete works, all appropriate legal consents must be in place to do this beforehand.

Root pruning will only be carried out using sharp, sterile tools suitable to the size of the root to be cut.

Where concrete is to be used the excavated holes will be sleeved using a 2-3mm PVC sheeting or bags to prevent concrete leaching into the soil.

Prior to backfilling the holes, any Hessian wrapping around roots will be removed, the roots will then be covered using the excavated soil, back to existing ground levels.

Specialist Foundation Construction
Foundations within the root protection area of trees will be constructed only using special engineering solutions which will avoid significant root pruning, methods such as piles and suspended ground beams or slabs will be used, appropriate design for the site conditions will be specified by an engineer in liaison with an arboriculturist. Any excavations in existing built footprints will not exceed the existing building footprint or depth of existing footings.

No-Dig Construction
Where no-dig construction is specified on this drawing the method of construction and installation will retain existing ground levels, any existing vegetation sprayed and hollows filled with sharp sand to create a level finish. The use of a load bearing three dimensional system with a permeable surface, and low impact kerb edging will be used to avoid soil compaction and potential damage to tree roots and stems. Appropriate tree root protection systems are available from www.geosyn.co.uk, or www.terram.com and this should be installed only by the manufacturer to ensure it is effective. Reference should be made to BS5837(2012) section 7.4 and Arboricultural Guidance Note 12 'Use of Cellular Confinement Systems Near Trees (www.trees.org.uk)

Underground drainage and services
Drainage and services installation will avoid the root protection area of trees, where this is unavoidable the approach to install will follow NJUG (2007 Volume 4, Issue 2). All manholes must avoid root protection areas entirely.

Excavations and Root Pruning
All excavations within root protection areas will be carried out under arboricultural site supervision. Prior to commencement, the extent of excavations will be marked out by the contractor with spray paint. No excavations will extend beyond these defined areas or the specified depths and the site contractor will be responsible for ensuring all ground workers are made aware of these limits. Exposed roots will be pruned making a clean cut with a sterilised handsaw, or secateurs to clear roots to the construction depth required. Where small diameter roots occur in clumps these will be retained and moved out of the way of construction where practical. All exposed pruned roots will be imediately wrapped in wet hessian to prevent desiccation and to protect against extreme temperature fluctuations. On completion of the excavations works the hessian will be removed and all pruned roots covered with good quality top soil. No machinery will be permitted within the RPA of the trees during these works.

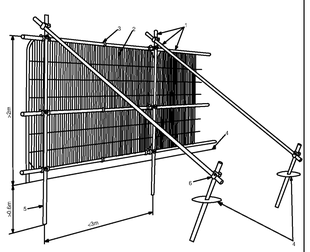
General Tree Protection Measures

- No construction or demolition works will take place within any protection zone identified on this drawing. Barriers and ground protection will remain intact and in position until works on site are completed, no alterations will take place without consulting the project arboriculturist beforehand
- No chemicals will be used within 3m of a tree, including hazardous material, cement or other toxic materials

Supervision of Works
Once protection measures as specified on this drawing are in place, the project arboriculturist will be notified and a site visit will take place to approve the installations are fit for purpose. Site operations can commence once this has been approved.

Ongoing site visits by the project arboriculturist will take place at intervals to ensure that tree protection measures are adhered to for the duration of the project works on site.

BS5837 Tree Protection Barrier 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.



BS5837:2012 Tree Categorisation

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

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

C Category
Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

U Category
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

Key

Root Protection Area (RPA)
The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees viability. Works within this area must be avoided in the first instance or be made subject of an agreed method with the arboricultural consultant.

BS 5837 2012 Default weldmesh specification for protective barrier

Construction exclusion zone, no entry by personnel or machinery permitted and no storage of materials

Area where existing hard surfacing is retained to act as ground protection to protect the roots of T48 during demolition and construction operations. To be removed during landscape phase of the project.

Do not scale from this drawing, tree positions and dimensions should always be checked on site. The original of this drawing is in colour, do not rely on monochrome versions. This drawing is copyright Tracy Clarke Tree Consultancy Ltd.©

0 5m 10m 20m 30m 40m 50m

Date	Revision	Description
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Title
Tree Protection Plan and Heads of Terms Method Statement

Client
Gravesham Community Investment Partnership

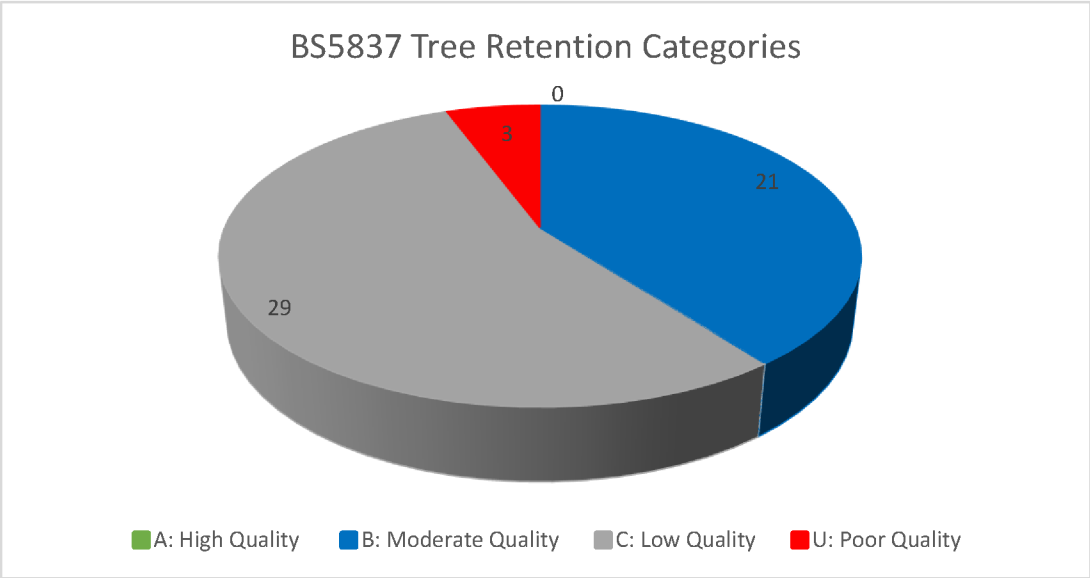
Site
Milton Place Car Park, Gravesham, Kent, DA12 2PQ

Ref: TCTC-19152-PL-03	**Rev:** -	**Scale:** 1:500 @ A1
Status: Planning	**Date:** Nov 2024	**Drawn By:** KM

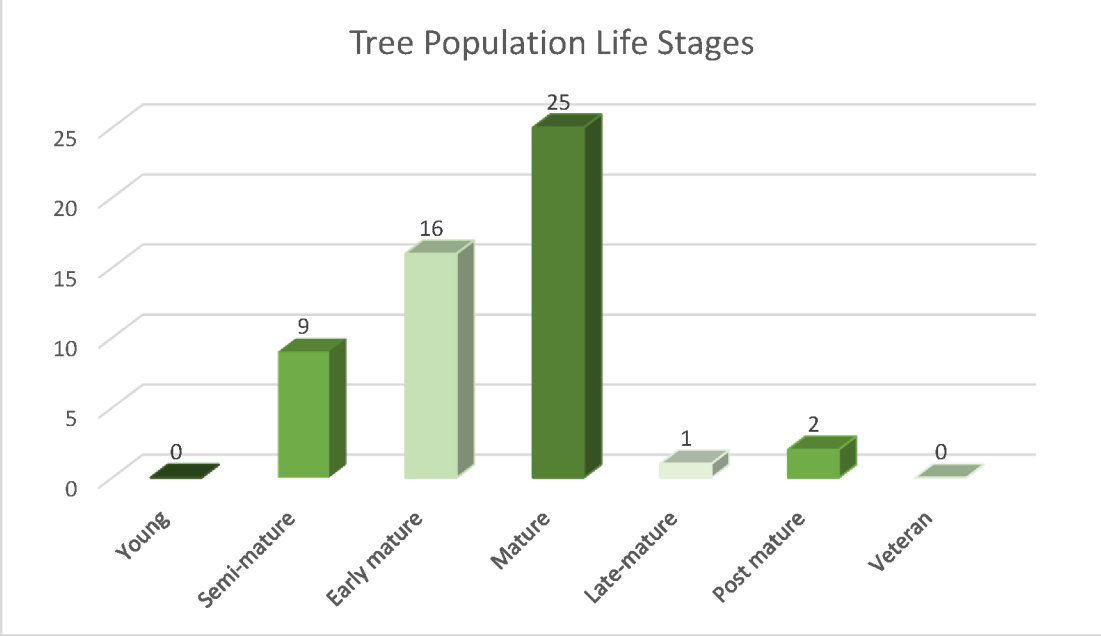
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Appendix C – Tree Data Analysis

BS5837 (2012) quality and value of the tree population



Age Diversity



Appendix D – Qualifications

I am a Registered Chartered arboriculturist with the Institute of Chartered Foresters, a Fellow of the Arboricultural Association, a Chartered Environmentalist, and I have a Postgraduate Diploma in arboriculture and community forest management from Middlesex University, and a Higher National Diploma in arboriculture and I have over twenty five years' experience in the field of arboriculture.

Tracy Clarke MICFor. F.Arbor.A. CEnv



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