TREE CONSULTANTS

ARBORICULTURAL REPORT

& Impact Assessment

to **BS5837:2012** at:

Land at

Wakefield Road,
Mapplewell,
Barnsley,
South Yorkshire
S75 6FZ

Prepared for:
FDA Landscape Ltd.
Westleigh Hall,
Wakefield Rd,
Huddersfield,
HD8 8QJ

Date: *March 2018*

Reference: *AWA1887*

Institute of Chartered Foresters
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1. Introduction

1.1 Instructions and Brief

1.1.1 We were instructed by Sue Farmer of FDA Landscape Ltd to visit the site and prepare our findings in a report.

1.1.2 The report is required in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations,* to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

1.2 Survey Details

1.2.1 The survey took place during June 2017.

1.2.2 The trees were surveyed visually from the ground using "Visual Tree Assessment" techniques and in accordance with the guiding principles of British Standard 5837:2012.

1.2.3 Any additional off-site trees that could impact a new development design have been included in the tree survey parameters.

1.2.4 The author's qualifications and experience are included within **Appendix 1**. Explanatory details regarding the survey methodology are included within **Appendix 2**. A full explanation of the tree data can be found at **Appendix 3**. Full details of all the trees surveyed are found in **Appendix 4**. For tree locations please refer to the Tree Constraints Plan at **Appendix 5.**

2. The Site

2.1 Location and Description

2.1.1 The site is located on Wakefield Road, between Staincross and Athersley North, in the Mapplewell area of Barnsley, 2 miles to the north of Barnsley town centre.

2.1.2 The centre of the site contains the remains of the demolition of a large building. Surrounding this are areas of dense scrub undergrowth to the boundaries of the site.

2.1.3 There are residential buildings and fields to the north, a public footpath within a woodland belt to the east, commercial units to the south, and Wakefield road and a residential area to the west.

3. The Trees

3.1 Legal

3.1.1 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a check should be made with the Local Planning Authority to see if the trees are covered by a Tree Preservation Order or if they are within a Conservation Area (unless such works are approved by planning permission). If either applies, then statutory permission is required before any works can take place.

3.1.2 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance. All tree work should be carried out according to British Standard 3998: 2010 *Tree Work - Recommendations*.

3.2 Tree Survey Results

3.2.1 The tree survey revealed 49 items of woody vegetation, comprised of 35 individual trees and 14 groups of trees or shrub/hedge groups.

3.2.2 Of the surveyed trees: 2 trees are retention category 'U', 16 trees are retention category 'B' and the remaining 31 trees are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).

3.2.3 The significant tree cover within the site consists of groups of trees along the boundaries, some of which are planted cypress hedgerows. Most of the other trees are groups of scrub and small trees of various age categories.

3.2.4 The majority of the site's trees are naturalised pioneer species that have established since the site was abandoned. The central areas of the site are generally inaccessible due to dense brambles. Within the dense bramble, the tree cover consists generally of low value natural regeneration of hawthorn scrub and the occasional larger individual tree.

3.2.5 Species diversity at the site is fair. The most abundant tree species are Hawthorn, Leyland Cypress, Oak, Poplar and Willow, with several Birch, Elder, Sorbus and Prunus, and occasional Apple, Dogwood, Juniper, Lawson Cypress and Maple.

3.2.6 Much of the western boundary of the site is formed by linear groups of Leyland Cypress trees (G3, G4, G44), closely planted with spacings of approximately 1m. The groups collectively provide good screening between the site and the roadside; however, the trees have been unmanaged for several years and they may be unsuitable within a development due to their current and potential size.

3.2.7 Between the western boundary and the footprint of the now demolished buildings are several trees and groups, of relatively low value (G1, T2, G5, T6, G7, T45 – T47). If it is necessary to remove any of these to facilitate future development, the removals can largely be mitigated by more appropriate planting throughout the site. Within this area are two larger Willow trees (T42, T43). These are visually prominent within most of the site and provide a reasonable level of amenity value.

3.2.8 Much of the northern and southern boundaries are formed by groups of large Poplar trees (G8, T9 – T12, G39, G40). Collectively these provide a good level of visual amenity, being prominent both within the site and from

the surrounding area. They provide a good screen between the site and the surroundings. However, individually the trees are of lower value and many contain various defects (as detailed in appendix 4), some of which may cause the trees to become unsuitable close to a new development.

3.2.9 A multi-stemmed Willow tree (T18) is situated close to the south eastern corner of the site. This tree is a large example of the species and provides a reasonable amount of visual amenity to this area of the site.

3.2.10 Beyond the eastern boundary of the site is part of an adjacent woodland (G20), forming a green belt between the site and the residential properties further to the east. This woodland provides a visual screen from the site and the residential area, and it has excellent prospects.

3.2.11 The northern half of the eastern boundary of the site is formed by a line of early and semi-mature Oak trees. These trees are generally in good overall condition and have good prospects. If retained within a development, they will collectively provide a good level of arboricultural value to the site and surrounding area.

3.2.12 Within the central site, to both the north and the east, are three large groups that generally contain dense lower value shrubs, saplings and natural regeneration (G14, G15, G41). These areas were inaccessible due to the height and density of the groundcover (as described in appendix 4). The northern group (G41) contains several larger trees. These are of slightly higher value but have become suppressed by the quick growing undergrowth and saplings that have begun to compete with them. If the removal of any of these tree groups is required to facilitate future development, the removals can largely be mitigated by more appropriate planting throughout the site.

3.2.13 Some trees were found to have defects and require pruning or felling regardless of any new development, this includes T17 and T19 (as detailed in Appendix 4).

3.2.14 Some trees were covered in dense Ivy or were inaccessible (as detailed in appendix 4). In such cases measurements were estimated and the condition values are indicative only.

3.2.15 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

4.1.1 It is proposed to build a new commercial property with associated access, landscaping and facilities. The development proposals have been provided by my client and inform this arboricultural impact assessment and the Tree Impacts Plan at Appendix 6.

4.2 Direct Impacts

4.2.1 From assessing the new development proposals, 8 trees, 4 tree or hedge groups and sections of 2 tree/hedge groups will require removal, as they are situated in the footprint of the structure or their retention and protection throughout the development is not suitable.

4.2.2 The trees and groups that require removal are G3, G5, T6, G7, T9, T10, T11, T12, T13, G14, T17, T19. Sections of groups G4 & G15 also requires removal.

4.2.3 The trees and groups that require removal are primarily lower value, retention category 'C'. Groups G3 & G4 are previously managed hedges that have become overgrown and unsuitable within any development. Trees and groups G5, T6, G7, T13, G14 & G15 are self-set shrubby trees with very limited arboricultural significance.

4.2.4 The individual Poplar trees T9, T10, T11 & T12 are an extension of the large retained Poplar group G8. Although of moderate value, the loss of amenity will largely be mitigated due to the larger retained trees within G8.

4.2.5 Trees T17 & T19 were assessed as being in a particularly poor condition and unsuitable regardless of any development.

4.2.6 The loss of amenity from the removals can largely be mitigated by selective replacement planting throughout the site as part of a new landscaping scheme.

4.2.7 Minor pruning works are required to two tree groups and one individual tree. The groups G1 and G8 encroach into the development site by no more than 2m along one edge. The large Willow tree T18 will require the western crown pruning back by approximately 2m, to appropriate growth points. The single tree and two tree groups are likely to easily tolerate this minor pruning with no significant loss of amenity value.

4.3 Indirect Impacts

4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.

4.3.2 New hard landscaping is proposed that encroaches into the edge of the RPA of G8 & T18. The construction of hard surfaces within the RPA can have negative impacts on tree roots. However, the encroachment is so minor as to be insignificant provided care is taken during construction.

4.3.3 The design of the new development has considered the trees crown positions in relation to the building. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. However, the design proposals avoid excessive shading, and give adequate provision for future tree growth.

4.3.4 The buildability of the proposed has been assessed in terms of access, adequate working space and provision for the storage of materials, including topsoil, in relation to the trees.

4.4 Suitable Mitigation

4.4.1 The development of the site provides an opportunity to undertake new tree planting at the site as part of a soft landscaping scheme. As such, suitable new tree planting has the potential to mitigate for the required tree removals and, in the longer term, has the potential to improve the sites tree cover.

4.5 Protection of the Retained Trees

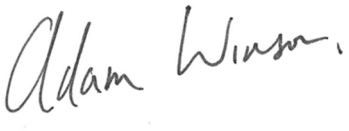
4.5.1 The retained trees will require protection by fencing in accordance with BS 5837: 2012, during the development phase.

4.5.2 If required by the Local Planning Authority, an associated Arboricultural Method Statement, detailing protective fencing specifications and construction methods close to the retained trees can be provided.

5. Signature

I trust this report provides all the required information.

Signed



.....

Adam Winson, *Chartered Arboriculturist, MSc, BSc (Hons), MICFor, ACIEEM.*

8th March 2018

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Appendices

Appendix 1: Authors Qualifications and Experience
Appendix 2: Survey Methodology and Limitations
Appendix 3: Explanation of Tree Descriptions
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Appendix 5: Tree Constraints Plan
Appendix 6: Tree Impacts Plan

Appendix 1: Authors Qualifications & Experience

Mr Adam Winson *Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, ACIEEM, QTRA Registered.*

Adam is the company Director and Principle Consultant. He has a mix of the highest level academic qualifications and relevant work experience. He has worked within the tree care profession for over 20 years, and was awarded an MSc in Arboriculture and Urban Forestry, with distinction. Adam is a Chartered Arboriculturist and a Registered Consultant with the Institute of Chartered Foresters, a Professional Member of the Arboricultural Association and has original research published by the UK Forestry Commission. His work ranges from individual expert tree inspections to managing trees on major multimillion pound housing developments and infrastructure projects. His work often involves trees with preservation orders or litigation, and he has appeared as a tree expert, at planning appeal hearings up to the Crown Court.

Mr James Brown *BSc (Hons) Arboriculture. MArborA.*

James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Forester's Student award. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. James previously worked in Europe's largest tree nursery and has experience of Local Authority tree officer work. His main work consists of tree surveys for development projects and preparing Tree Protection Schemes to BS 5837:2012.

Mr Dave Farmer *FdSc (Arb). MArborA. PTI (Lantra).*

Dave has a Foundation Degree in Arboriculture (with Distinction) and is qualified in Professional Tree Inspection. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. Dave has many years of experience within the tree care profession, including lecturing in arboriculture. His work focuses on diagnosing potential tree risk problems, and recommending appropriate treatments and work programmes.

Dr Felicity Stout *Ph.D, MA, BA (Hons), Cert Ed (Forestry), TechArborA.*

Felicity has worked in the tree care profession for the last 10 years. She has a Certificate in Higher Education in Forestry, with a focus on Urban Forestry. She has practical arboricultural contractor experience and is a qualified and experienced Social Forestry practitioner. Felicity has a PhD in History, with a particular interest in the history of woodland and tree management and has published in The Arboricultural Journal on this subject.

Mr Ricky Nos BSc *(Hons),* FdSc *(Arboriculture), TechArborA.*

Ricky is a trained arborist with 10 years of experience in the private and local authority sectors, taking in all aspects of arboricultural work. He has a Foundation Degree in Arboriculture and a BSc (Honours) in Outdoor Management, and is a technician Member of the Arboricultural Association. His main work consists of tree surveys for development projects, involving tree inspections and the preparation of Tree Reports to BS 5837:2012.

Appendix 2: Survey Methodology and Limitations of Report

The survey was undertaken in accordance with British Standard 5837 (2012) *Trees in relation to design, demolition and construction –Recommendations.* The trees were assessed objectively and without reference to any proposed site layout. The trees were surveyed from the ground using 'Visual Tree Assessment' (VTA) methodology. VTA is appropriate and is endorsed by industry guidance. It is used by arboriculturists to evaluate the structural integrity of a tree, relying on observation of trees biomechanical and physiological features. Measurements are obtained using a diameter tape, clinometer, laser distometer and loggers tape. Where this is not practical measurements are estimated. Tree groups have been identified in instances as defined in BS 5837 (2012). Shrubs and insignificant trees may have been omitted from the survey.

This report represents a BS5837 tree survey and should not be accepted as a detailed tree safety inspection report; however, tree related hazards are recorded and commented upon where observed, yet no guarantee can be given as to the absolute safety or otherwise of any individual tree. All recommended tree work must be to BS 3998: 2010 - '*Tree Work: Recommendations'*.

The findings and recommendations contained within this report are valid for a period of twelve months from the date of survey. The author shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with these guidelines and terms.

Appendix 3: Explanation of Tree Descriptions

HEIGHT of the tree is measured from the stem base in metres. Where the ground has a significant slope the higher ground is selected.

CROWN HEIGHT is an indication of the average height at which the crown begins and includes information of the first significant branch and direction of growth.

STEM DIAMETER is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; the diameter is measured close to ground level or else a combined stem diameter is calculated.

CROWN SPREAD is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

AGE CLASS of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

PHYSIOLOGICAL CONDITION is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vigour, presence of disease and dieback.

STRUCTURAL CONDITION is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

LIFE EXPECTANCY is classed as; less than 10 years, 10-20 years, 20-40 years, or more than 40 years. This is an indication of the number of years before removal of the tree is likely to be required.

Retention Categories

A (marked green on Appendix 5) = retention most desirable. These trees are of very high quality and value with a good life expectancy.

B (marked in blue on Appendix 5) = retention desirable. These trees are of good quality and value with a significant life expectancy.

C (marked in grey on Appendix 5) = trees which could be retained. These trees are of low or average quality and value, and are in adequate condition to remain until new planting could be established.

U (marked in red on Appendix 5) = trees for removal. These trees are in such a condition that any existing value would be lost within 10 years.

Appendix 4: Tree Data

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
G1	Hawthorn, Pyracantha	*Crataegus sp. Pyracantha sp.*	Early-mature	5	10 +	50	No	0	See Plan				Previously managed group of multi-stemmed shrubs, now ovegrown.				Good	Good	>40 yrs	Low	**C**	Prune back overhanging crown as required to facilitate development
T2	Juniper	*Juniperus communis*	Early-mature	6.5	1	150	No	0.5	1.5	1.5	1.5	1.5	No visual defects.	Single stemmed at base. Vertical.	Normal.		Good	Good	>40 yrs	Low	**C**	No works required
G3	Leyland Cypress	*X Cuppressocyparis leylandii*	Early-mature	11	10 +	300	No	1	See Plan				Previously managed boundary hedge, now becoming overgrown. Approximately 1m spacings. May be unsuitable within a development due to height.				Good	Good	>40 yrs	Moderate	**C**	Removal required to facilitate development
G4	Leyland Cypress	*X Cuppressocyparis leylandii*	Early-mature	7	10 +	300	No	0.5	See Plan				Previously managed boundary hedge, now becoming overgrown. Approximately 1m spacings. May be unsuitable within a development due to height.				Good	Good	>40 yrs	Moderate	**C**	Removal of northern half of group to facilitate development
G5	Willow	*Salix caprea*	Semi-mature	6	10 +	70	No	1	See Plan				Closely growing group of stems forming one crown.				Good	Good	>40 yrs	Low	**C**	Removal required to facilitate development
T6	Birch	*Betula pendula*	Young	7	1	100	No	1	1.5	1.5	1.5	1.5	No visual defects.	Single stemmed. Slight lean.	Normal.		Good	Good	>40 yrs	Low	**C**	Removal required to facilitate development

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
G7	Birch, Poplar, Willow	*Betula sp. Populus sp. Salix sp.*	Semi-mature	6	10 +	60	No	1	See Plan				Dense group of young natural regeneration.				Good	Good	>40 yrs	Low	**C**	Removal required to facilitate development
G8	Poplar	*Populus x canadensis*	Mature	12	10 +	400	No	3	See Plan				Dense boundary group of mature Poplar trees, approximately 4m spacings. Understorey of occasional Willow, Cherry, Hawthorn, Birch, Rowan and Poplar saplings. No access around base of trees.				Fair	Fair	>40 yrs	Moderate	**B**	Prune back overhanging crowns along northern boundary as required to facilitate development
T9	Poplar	*Populus x canadensis*	Mature	15	2	620, 490	No	7	8	8	3	7	No visual defects.	Twin stemmed at 1m. Vertical. Stubs.	Normal. Minor deadwood. Slightly unbalanced.	Rubble piled around base.	Fair	Good	>40 yrs	Moderate	**B**	Removal required to facilitate development
T10	Poplar	*Populus x canadensis*	Mature	11	1	590	No	4	5	7	2	5	No visual defects.	Twin stemmed at 1.5m. Vertical. Stubs. Old pruning wounds. Minor decay.	Small / sparse. Slightly unbalanced. Minor dieback. Major deadwood. 50% dead / absent.	Rubble piled around base. May become unsuitable near any development.	Poor	Fair	>40 yrs	Low	**C**	Removal required to facilitate development
T11	Poplar	*Populus x canadensis*	Early-mature	11	1	380	No	7	4	4	2	5.5	No visual defects.	Single stemmed. Slight lean. Stubs. Old pruning wounds. Minor decay.	Normal. Unbalanced.	Suppressed by surropunding trees.	Fair	Fair	>40 yrs	Low	**C**	Removal required to facilitate development
T12	Poplar	*Populus x canadensis*	Early-mature	10	1	350	No	3	6	5	3	5	No visual defects.	Single stemmed. Vertical. Stubs. Old pruning wounds. Bark damage. Minor cavities. Minor decay.	Normal. Unbalanced.	Suppressed by surrounding trees. Unsuitable within any development.	Poor	Poor	>40 yrs	Low	**C**	Removal required to facilitate development

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T13	Willow	*Salix caprea*	Semi-mature	7	3	210, 130, 90	No	2	2.5	3	3	3	No visual defects.	Multiple stemmed at base. Vertical.	Normal. Minor deadwood.	Rubble piled around base.	Good	Good	>40 yrs	Low	**C**	Removal required to facilitate development
G14	Apple, Birch, Hawthorn, Oak, Poplar, Sorbus	*Malus sp. Betula sp. Crataegus sp. Quercus sp.Populus sp. Sorbus sp.*	Young	6	10 +	60	Yes	1	See Plan				Dense group of young natural regeneration. 90% Willow saplings.				Good	Good	>40 yrs	Low	**C**	Removal required to facilitate development
G15	Birch, Dogwood, Hawthorn, Sorbus	*Betula sp. Cornus sp. Crataegus sp. Sorbus sp.*	Young	3	10 +	100	Yes	1	See Plan				Generally open area with a groundcover of dense bramble & thistle. Occasional open grown trees, probably self-set. 2-6m tall. Low value shrubby growth.				Good	Good	>40 yrs	Moderate	**C**	Removal of trees within south of group as required to facilitate development
T16	Oak	*Quercus robur*	Early-mature	10	7	150	No	5	2.5	2	6	5	No visual defects.	Multiple stemmed at base. Vertical. Stubs.	50% dead / absent. Small / sparse. Major deadwood. Minor dieback. Slightly unbalanced.	Suppressed by surrounding trees.	Poor	Fair	10 to 20 yrs	Low	**C**	No works required
T17	Willow	*Salix fragilis*	Early-mature	14	1	450	No	8	3	4	6	4	Decay.	Single stemmed. Slight lean. Stubs. Major cavity. Major decay.	Small / sparse. Moderate deadwood.	Large basal cavity with decay from the failure of a 2nd stem.	Fair	Poor	10 to 20 yrs	Low	**U**	Removal required regardless of any development
T18	Willow	*Salix fragilis*	Mature	15	10 +	300	No	3	10	10	10	10	No visual defects.	Multiple stemmed at base. Vertical.	Normal. Minor deadwood.	Very large multi-stemmed Willow tree.	Good	Fair	>40 yrs	Moderate	**B**	Prune back western crown by 2m to facilitate development

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T19	Willow	*Salix caprea*	Semi-mature	10	7	100	No	5	4	1.5	5	4	No visual defects.	Multiple stemmed at base. Slight lean. Major cavities. Major decay.	75% dead / absent. Small / sparse. Major dieback. Major deadwood. Unbalanced	Overhanging footpath.	Poor	Poor	<10 yrs	Low	**U**	Removal required regardless of any development
G20	Oak, Birch, Sycamore	*Quercus sp. Betula sp. Acer sp.*	Early-mature	10	10 +	200	Yes	2	See Plan				Woodland group between the boundary of the site and a public footpath. 90% semi to early mature oak. Occasional birch and sycamore. Excellent future prospects.				Good	Good	>40 yrs	Moderate	**B**	No works required
T21	Birch	*Betula pendula*	Early-mature	12	2	210, 190	No	5	3	3	3	3	No visual defects.	Twin stemmed at base. Vertical. Bark damage. Old pruning wounds. Stubs.	Normal.		Fair	Good	>40 yrs	Moderate	**C**	No works required
T22	Apple	*Malus sylvestris*	Early-mature	6	6	150	No	2	3.5	4.5	3	4.5	No visual defects.	Multiple stemmed at base. Vertical. Stubs. Old pruning wounds.	Normal. Minor deadwood.		Good	Good	>40 yrs	Low	**C**	No works required
T23	Oak	*Quercus robur*	Early-mature	9	3	340, 250, 240	No	3	6	6	6	4.5	No visual defects.	Multiple stemmed at base. Vertical. Stubs. Old pruning wounds.	Normal. Minor deadwood.	Good future prospects. Low open form.	Good	Good	>40 yrs	Moderate	**B**	No works required
T24	Oak	*Quercus robur*	Early-mature	9	1	420	No	3	5	3.5	3.5	4.5	No visual defects.	Single stemmed. Vertical. Minor cavity. Bark damage.	Normal. Minor deadwood.	Good future prospects.	Good	Good	>40 yrs	Moderate	**B**	No works required

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T25	Oak	*Quercus robur*	Semi-mature	4	1	120	No	0.5	2.5	2.5	2.5	2.5	No visual defects.	Single stemmed. Vertical.	Normal. Minor deadwood.		Good	Good	>40 yrs	Low	**C**	No works required
T26	Oak	*Quercus robur*	Early-mature	10	1	380	No	2	4	4.5	3.5	1.5	No visual defects.	Single stemmed. Slight lean. Tight union. Old pruning wounds. Stubs. Minor cavities. Minor decay.	Normal. Minor deadwood.	Multiple points of decay from old pruning wounds.	Fair	Fair	>40 yrs	Moderate	**C**	No works required
T27	Oak	*Quercus robur*	Semi-mature	10	1	180	No	3	1	1	3.5	2	No visual defects.	Single stemmed. Slight lean. Minor cavities. Minor decay.	Normal. Minor deadwood.	Suppressed by surrounding trees.	Fair	Fair	>40 yrs	Low	**C**	No works required
T28	Oak	*Quercus robur*	Early-mature	10	2	250, 180	No	3	3.5	4	4	4	No visual defects.	Twin stemmed at base. Vertical. Stubs. Old pruning wounds. Minor decay.	Normal. Minor deadwood.		Fair	Good	>40 yrs	Moderate	**B**	No works required
T29	Oak	*Quercus robur*	Early-mature	11	2	420, 340	No	3	4.5	4.5	4	3	No visual defects.	Twin stemmed at 1m. Vertical. Stubs. Old pruning wounds. Minor decay.	Normal. Minor deadwood.		Good	Good	>40 yrs	Moderate	**B**	No works required
T30	Oak	*Quercus robur*	Semi-mature	11	2	200, 170	No	6	3	1.5	3.5	1	No visual defects.	Twin stemmed at base. Vertical. Stubs. Old pruning wounds. Epicormic growths. Minor decay.	Small / sparse. Minor dieback. Moderate deadwood.	Suppressed by surrounding trees.	Poor	Fair	10 to 20 yrs	Low	**C**	No works required

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T31	Oak	*Quercus robur*	Early-mature	11	3	320, 150, 100	No	3	1	3	5	3	No visual defects.	Multiple stemmed at base. Vertical. Bark damage. Tight union. Partially included bark.	Moderate deadwood. Unbalanced.		Fair	Fair	>40 yrs	Moderate	**C**	No works required
T32	Oak	*Quercus robur*	Semi-mature	9	1	160	No	4	1	1	5	2	No visual defects.	Single stemmed. Vertical. Stubs.	Normal. Moderate deadwood. Slightly unbalanced.	Large eastern limb is dead. Suppressed by surrounding trees.	Fair	Fair	20 to 40 yrs	Low	**C**	Remove eastern limb regardless of any development
T33	Oak	*Quercus robur*	Early-mature	12	2	310, 250	No	4	4	3	5	4	No visual defects.	Twin stemmed at base. Vertical.	Moderate deadwood.		Good	Good	>40 yrs	Moderate	**B**	No works required
T34	Oak	*Quercus robur*	Early-mature	14	3	310, 270, 200	No	5	6.5	3.5	3.5	4	No visual defects.	Multiple stemmed at base. Vertical. Minor cavities.	Minor deadwood.		Good	Good	>40 yrs	Moderate	**B**	No works required
T35	Oak	*Quercus robur*	Early-mature	12	4	300, 250, 200, 100	No	2	3.5	3.5	4	5.5	No visual defects.	Multiple stemmed at base. Vertical. Tight union. Partially included bark. Minor decay. Stubs. Old pruning wounds.	Normal. Minor deadwood.		Good	Fair	>40 yrs	Moderate	**B**	No works required
T36	Oak	*Quercus robur*	Semi-mature	6	1	150	No	1	2	2	2	2	No visual defects.	Single stemmed. Vertical.	Normal.		Good	Good	>40 yrs	Low	**C**	No works required

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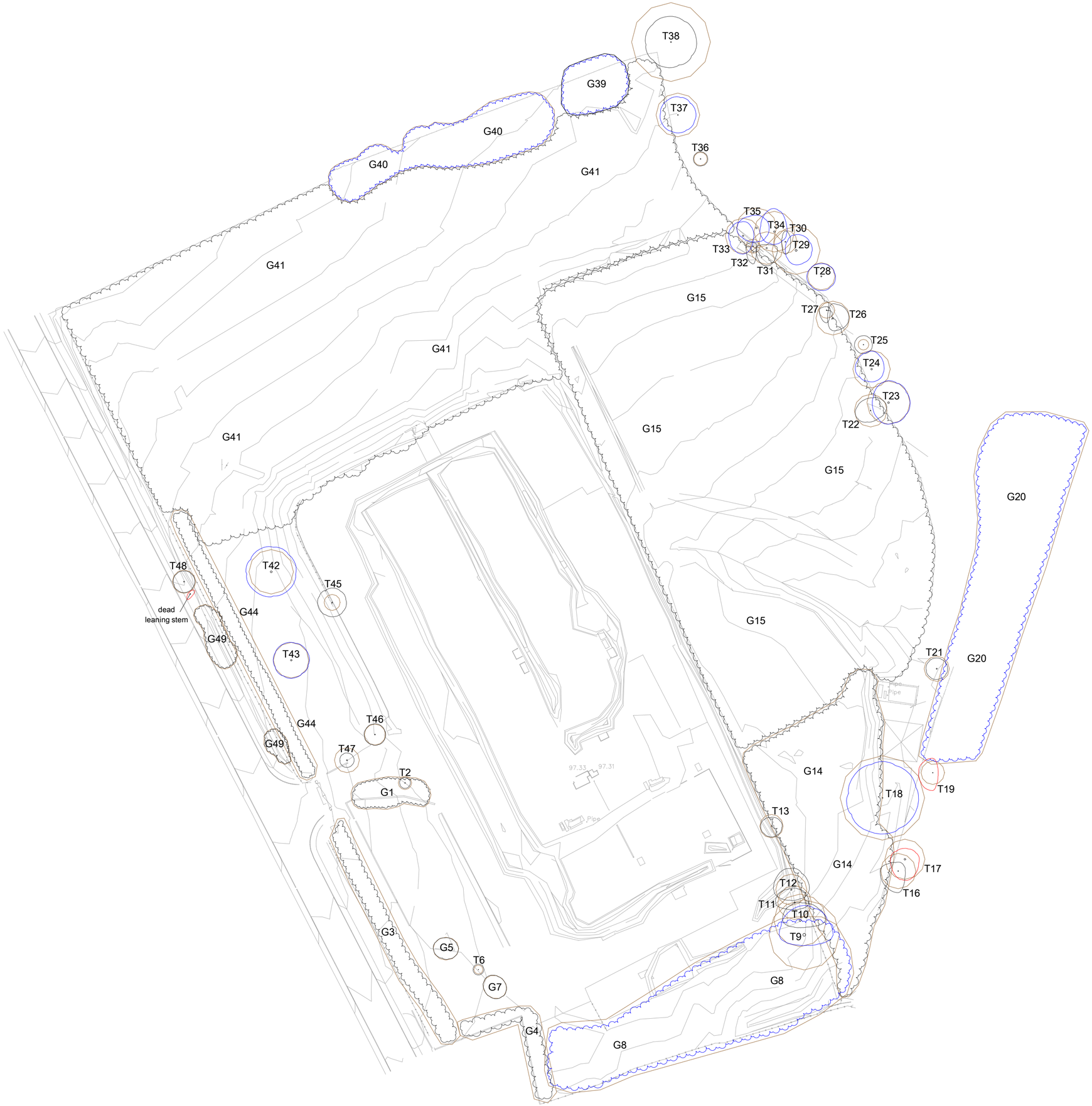
	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T37	Oak	*Quercus robur*	Early-mature	14	6	200	Yes	3	5	5	5	5	No visual defects.	Multiple stemmed at base. Vertical.	Normal. Minor deadwood.	No access around base of tree.	Good	Good	>40 yrs	Moderate	**B**	No works required
T38	Maple	*Acer pseudoplatanus*	Early-mature	14	10 +	280	No	2	6	6	6	6	No visual defects.	Multiple stemmed at base. Vertical. Stubs. Old pruning wounds. Minor decay.	Normal. Minor deadwood.		Fair	Fair	>40 yrs	Moderate	**C**	No works required
G39	Poplar	*Populus x canadensis*	Early-mature	15	3	250	No	3	See Plan				Linear group of 3 trees. 3 trees total. Average of 3 stems per tree, average DBH of 250mm. No access around base of trees.				Fair	Good	>40 yrs	Moderate	**B**	No works required
G40	Poplar	*Populus x canadensis*	Early-mature	17	10 +	400	Yes	2	See Plan				Occassional Lombardy Poplar within the group. Both single and mutli-stemmed trees. Understorey of elder and sycamore. No access around base of trees.				Good		>40 yrs	Moderate	**B**	No works required
G41	Elder, Hawthorn, Oak, Poplar, Prunus, Willow	*Sambucus sp. Crataegus sp. Quercus sp. Populus sp. Prunus sp. Salix sp.*	Semi-mature	6	10 +	180	Yes	1	See Plan				Group of open grown trees. Approximately 75% Hawthorn, the rest is an even mix of other species. Understory of dense young natural regeneration and brambles. No access into any part of the group. Possibly once a planted, well managed bank. Now overgrown with low value shrubs, saplings and dense undergrowth. Larger trees are in average or poor condition due to the dense growth around the bases and within the canopies.				Good	Good	>40 yrs	Moderate	**C**	No works required
T42	Willow	*Salix chrysocoma*	Mature	15	1	500	Yes	2	7	7	7	7	No visual defects.	Single stemmed. Vertical.	Normal. Minor Deadwood.	No access around base of tree.	Fair	Fair	>40 yrs	Moderate	**B**	No works required

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T43	Willow	*Salix chrysocoma*	Mature	13	1	400	Yes	2	5	5	5	5	No visual defects.	Single stemmed. Vertical.	Normal. Minor Deadwood.	No access around base of tree.	Fair	Fair	>40 yrs	Moderate	**B**	No works required
G44	Leyland Cypress	*X Cuppressocyparis leylandii*	Early-mature	12	10 +	300	No	1	See Plan				Previously managed boundary hedge, now becoming overgrown. Approximately 1m spacings. May be unsuitable within a development due to height.				Good	Good	>40 yrs	Moderate	**C**	No works required
T45	Willow	*Salix caprea*	Semi-mature	6	2	150, 100	No	0.5	4	4	4	4	No visual defects.	Twin stemmed at base. Vertical.	Minor deadwood.		Good	Good	>40 yrs	Low	**C**	No works required
T46	Hawthorn	*Crataegus monogyna*	Semi-mature	6	3	150, 150, 100	No	0.5	3	3	3	3	No visual defects.	Multiple stemmed at base. Vertical. Partially included bark. Tight union.	Normal.		Good	Fair	>40 yrs	Low	**C**	No works required
T47	Lawson Cypress	*Chamaecyparis lawsoniana*	Semi-mature	8	1	280	No	0	2	2	2	2	No visual defects.	Twin stemmed at 1m. at 2m. Vertical.	Normal.		Good	Good	>40 yrs	Low	**C**	No works required
T48	Hawthorn	*Crataegus monogyna*	Early-mature	6	4	160, 130, 120, 110	No	1	3	3	3	3	No visual defects.	Multiple stemmed at base. Vertical. Tight union.	Normal.		Good	Good	>40 yrs	Moderate	**C**	No works required

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
G49	Elder	*Sambucus nigra*	Mature	6	10 +	150	No	1	See Plan				Roadside group of small shrubby trees.				Fair	Fair	>40 yrs	Moderate	**C**	No works required

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NORTH

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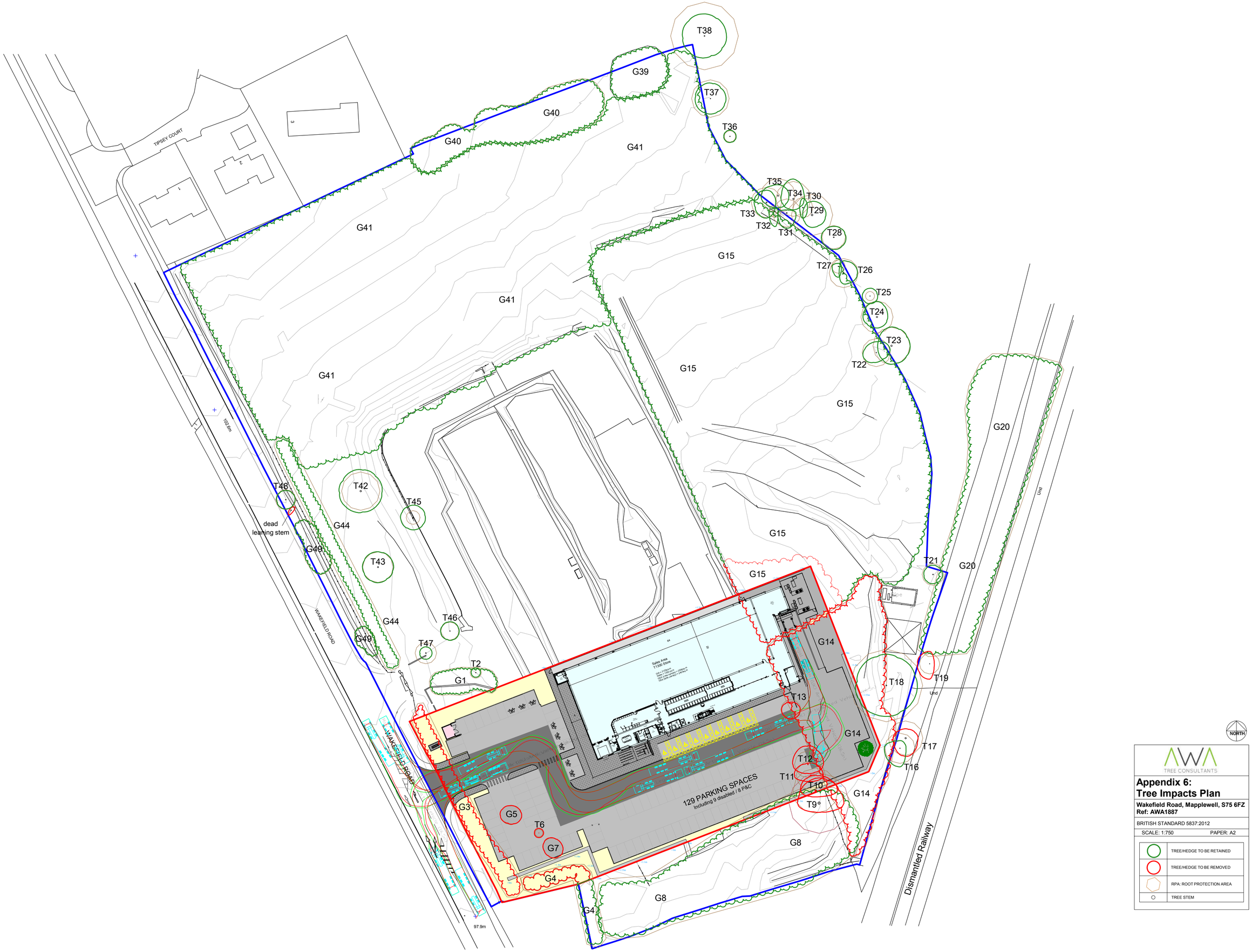
Appendix 5: Tree Constraints Plan

Wakefield Road, Mapplewell, S75 6FZ
Ref: AWA1887

BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions of these catagories can be found in Appendix 2 of the report.

SCALE: 1:750 PAPER: A2

	CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE
	CATEGORY B: MODERATE VALUE RETENTION DESIRABLE
	CATEGORY C: LOWER VALUE COULD BE RETAINED
	CATEGORY U: FOR REMOVAL
	RPA: ROOT PROTECTION AREA
	TREE STEM



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Appendix 6:
Tree Impacts Plan

Wakefield Road, Mapplewell, S75 6FZ
Ref: AWA1887

BRITISH STANDARD 5837:2012

SCALE: 1:750 PAPER: A2

	TREE/HEDGE TO BE RETAINED
	TREE/HEDGE TO BE REMOVED
	RPA: ROOT PROTECTION AREA
	TREE STEM