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**Arboricultural Advice in accordance with
BS 5837:2012 Trees in relation to construction – Recommendations
Tree survey and Impact Assessment
17th June 2024**

Subject Property: Unit 7
 Smallbridge Business Park
 Riverside Drive
 Rochdale
 OL16 2SH

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1 INTRODUCTION

1.1 Brief: We are instructed to carry out an arboricultural survey of a proposed development site, Unit 7 Smallbridge Business Park, Riverside Drive, Rochdale, OL16 2SH and to provide a tree survey and arboricultural impact assessment in accordance with BS5837:2012 *Trees in relation to construction – Recommendations* (hereafter BS5837).

1.2 Qualifications and experience: This report is based on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture and list the details in Appendix 2. Observations or comments on structural engineering and the law are made from an arboricultural perspective. Specialist professional advice should be sought to clarify such observations.

1.3 Documents and information provided: I was provided with copies of the following documents:

- Existing site - topographical plan (1551-001-001 Unit 7 Smallbridge Business Park.dwg)
- Proposed site plan (1551-001-001 Unit 7 Smallbridge Business Park PROPOSALS)

1.4 Scope of this report: This report includes an assessment of the trees in relation to potential development in order to:

1. Record principle attributes (species, height, crown spread and stem diameter).
2. Determine their quality and value.
3. Identify their remaining contribution and retention grading.
4. To identify the level of tree retention and removal and to illustrate on a tree retention and removal plan.
5. To appraise the impact of tree losses arising as a result of the proposals.
6. To appraise the impact of the proposals on the retention trees.

1.5 Purpose of the report: This report utilises the tree survey data to detail the arboricultural impact of the proposed layout.

1.6 Caveats: This report is only concerned with trees in relation to construction. It includes a detailed assessment based on the site visit and the documents provided, listed in 1.3 above. All my observations were from ground level without detailed investigations. Aerial tree inspection, invasive procedures and sub-soil investigations are outside the scope of the report. Should further assessment involving any of these be required it will be highlighted in the report.

2 BS5837:2012 - THE ITERATIVE PROCESS

2.1 Trees and the planning system – BS5837 Annex B

2.1.1 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. Where trees are statutorily protected, it is important to contact the local planning authority and follow the appropriate procedures before undertaking any works that might affect the protected trees.

2.1.2 The nature and level of detail of information required to enable a local planning authority to properly consider the implications and effects of development proposals varies between stages and in relation to what is proposed. Table B.1 provides advice to both developers and local authorities on an appropriate amount of information. The term “minimum detail” is intended to reflect information that local authorities are expected to seek, whilst the term “additional information” identifies further details that might reasonably be sought, especially where any construction is proposed within the Root Protection Area (RPA)¹.

2.1.3 Table B.1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree Survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalised) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural impact assessment	Existing and proposed finished levels Tree protection plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved matters/planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement – detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

¹ Root Protection Area is a 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.



2.1.4 In support of the application the following documents have been prepared:

- a. Tree survey compliant with BS 5837
- b. Arboricultural Impact Assessment
- c. Tree Protection Plan (including an arboricultural method statement).

3 THE TREE SURVEY

3.1 Tree survey methodology

3.1.1 A tree survey was carried out compliant with BS5837. The collected data is included below and the pertinent information is shown graphically on the Tree Constraints Plan (Appendix 1).

3.1.2 Trees are categorised in accordance with the cascade chart in Table 1 of BS5837:2012. The purpose of the categorisation process is to differentiate the quality and value of the existing tree stock so that informed decisions can be made on the retention or removal of trees.

3.1.3 The tree categories are summarised thus:

Category U: Trees unsuitable for retention that will be lost within the short term for reasons of physiology or structural integrity.

Category A: Trees of particularly high quality in arboricultural, landscape or cultural/conservation terms

Category B: Moderate quality trees downgraded from the high category because of significant defects, groups with a collective value through numbers rather than individual tree quality or trees with identifiable cultural or conservation values.

Category C: Trees with low value in arboricultural, landscape or cultural/conservation terms. Also includes young trees with a stem diameter of less than 150mm.

For trees in categories A – C subcategories 1, 2 & 3 are given to reflect arboricultural, landscape and cultural values respectively.

3.2 Findings of the survey

3.2.1 In the course of the tree survey we identified 1 individual tree and 4 tree groups. Of these it was found that they fell into the following quality and value grades:

QV Category	Description	No. of trees	%	No. of groups	%
U	Trees lost in the short term (<10 years)	0	0	0	0
A	Trees of particularly high quality	0	0	0	0
B	Trees of moderate quality	0	0	0	0
C	Trees of low quality	1	100	4	100
		1	100	4	100

3.3 Tree Survey Schedule Explanatory Notes

- **ID no.:** Trees are recorded using a site-specific unique identification number. This identification number is used for all references throughout the report and associated plans
- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
- **Estimated dimensions:** Estimated dimensions are *italicised*.
- **Height:** The height of the tree in metres.
- **Stem diameter(s):** This is measured at 1.5m above ground level and recorded in millimetres. Trees with low crowns are measured just above the root flare. For trees with multiple stems see 3.2.2 in main text. For groups the stem diameter for 80 percentile member is recorded
- **NSWE:** The branch spread is measured in metres at the four cardinal points of the compass to derive an accurate representation of the crown.
- **Ht 1st branch:** Height above ground in metres of attachment point of first significant branch (cardinal point may be given indicating direction of lowest branch).
- **Crown Clearance:** Height of the crown above ground level at the lowest point.
- **Life Stage:** Assessed as Young, Semi-Mature, Early Mature, Mature, Over Mature and Veteran.
- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the tree summarised into:
 - Good: Generally in healthy condition
 - Fair: Condition satisfactory though below mean species performance
 - Poor: Tree in decline
 - Dead: Self-explanatory
- **Structural condition & Notes:** Notes on the structural integrity of the tree based on visual tree assessment, including damage, decay fungi, pests, etc. as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for retention or removal in light of the development proposals.
- **Ret. Span:** An estimate of the remaining contribution span that the tree or group of trees is expected to have, based on species, condition and context. The following longevity bands are used, categorised accordingly:
 - <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling
 - Unsuitable for retention



10+ Short-term longevity only: replacement planting generally appropriate

20+ Mid-term longevity

>40 Good longevity

- **QV Grade:** Quality & Value grade classification according to BS5837

U - Unsuitable for retention

A - High retention priority

B - Moderate retention priority

C - Low retention priority

+subcategories 1, 2 & 3 reflecting arboricultural, landscape and cultural values respectively.

- **Retention / removal colour code:**

Trees and groups to be retained

Trees and groups to be removed to facilitate development

Trees and groups to be removed for arboricultural reasons



3.4 Tree Survey Schedule

FTC Ref. No. (autoincrements)	Species	Ht. (m)	Crown Spread (m)				Ht. 1 st Br. (m)	Ht. Can. (m)	Stem Count	Stem Dia. (mm)					RPA Rad. (m)	RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Structural condition & Notes	Management recommendations	Ret. Span <10, 10+ 20+, >40	QV Grade U-A-B-C
			N	S	W	E				1 / mean	2	3	4	5								
1	Goat willow	2.8	2.2	1.9	2.4	2.3	0.4 NW	0.3	3	110	90	80			1.96	12	EM	F	Multiple stems from low level with tight forks where stems meet. No observed dieback or disease	No action required at time of survey	10+	C1

3.5 Explanatory Notes for Tree groups

- **ID no.:** Unique tree group or woodland reference number.
- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed. The species listed represent the main components and there may be other minor species not listed.
- **Estimated dimensions:** Estimated dimensions are *italicised*.
- **Count:** Number of trees recorded within groups or woodlands. Accurate count for less than 20 trees, estimated number for 20+ trees.
- **Area:** Approximate area of woodland groups recorded in hectares.
- **Height:** Height is to the nearest metre.
- **Stem diameter(s):** Stem diameter at 1.5m above ground level for 80 percentile member of TG, WG of H. Trees with larger diameters are identified on the plan at Appendix 3.
- **MRCS:** An estimated mean radial crown spread for trees at the 80 percentile size.
- **Ht 1st branch:** Height above ground in metres of attachment point of first significant branch (cardinal point may be given indicating direction of lowest branch).
- **Crown Clearance:** Height of the crown above ground level at the lowest point.
- **Life Stage:** Assessed as Young, Semi-Mature, Early Mature, Mature, Over Mature and Veteran.
- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the tree summarised into:
 - Good: Generally in healthy condition
 - Fair: Condition satisfactory though below mean species performance
 - Poor: Tree in decline
 - Dead: Self-explanatory
- **Structural condition & Notes:** Notes on the structural integrity of the tree based on visual tree assessment, including damage, decay fungi, pests, etc as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for intervention (e.g. tree surgery, felling, etc) prior to any development. Immediately hazardous trees will be notified to the client separately.
- **Ret. Span:** An estimate of the remaining contribution span that the tree or group of trees is expected to have, based on species, condition and context. The following longevity bands are used, categorised accordingly:
 - <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling Unsuitable for retention
 - 10+ Short-term longevity only: replacement planting generally appropriate
 - 20+ Mid-term longevity
 - 40+ Good longevity



- **QV Grade:** Quality & Value grade classification according to BS5837:2012
 - U - Unsuitable for retention
 - A - High retention priority
 - B - Moderate retention priority
 - C - Low retention priority
 - +subcategories 2 & 3 reflecting arboricultural, landscape and cultural values respectively.



3.6 Tree Survey Data for Tree Groups

FTC Ref. No. (autoincrements)	TPO Ref	Species	Tree Count	Ht. (m)	M RCS (m)	Ht. 1 st Br. (m)	Ht. Can. (m)	Specimen Stem Dia. (mm)	Specimen RPA Rad. (m)	Specimen RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Structural condition & Notes	Management recommendations	Ret. Span <10, 10+ 20+, >40	QV Grade U-A-B-C
TG1		Goat willow	5	8.5	3	0.5 - S	0.8	200	2.40	18	EM	F	Cannot fully assess base of trees as trees are on 3rd party land behind fence. All have multiple stems from ground level with included unions where stems meet. No observed dieback or disease	No action required at time of survey	20+	C2
TG2		Goat willow, silver birch	12	9	2.5	0.8 - N	1.4	150	1.80	10	EM	F	Dense area of somewhat scrubby trees. No observed dieback or disease	Remove to facilitate development	20+	C2
TG3		Goat willow, silver birch	15	9	2.5	1.2 - S	1.5	140	1.68	9	EM	F	Dense area of somewhat scrubby trees. Most have multiple stems from low level. No observed dieback or disease	Remove to facilitate development	20+	C2
TG4		Goat willow	6	9.5	3.5	1 - S	1	180	2.16	15	EM	F	Cannot fully assess base of trees as trees are on 3rd party land behind fence. All have multiple stems from ground level with included unions where stems meet. No observed dieback or disease	No action required at time of survey	20+	C2

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Tree retention and removal

4.1.1 The proposal is the extension of car parking facilities within the plot and grounds of an existing industrial unit. The proposal also includes the removal of the existing boundary fence and installation of a new 2.4m high boundary fence around the entire site. The existing site access off Riverside Drive will be maintained with a new double gate being incorporated into the new fence line

4.1.2 There are few significant trees on the site itself, but there are areas of unmanaged tree growth immediately adjacent to the existing site boundary on 3rd party land. Two areas of self-set and relatively unmanaged tree growth are also present within the site bounds towards the Eastern end. Along the frontage of Riverside Drive is an area of low shrubs and managed grass which does not meet the minimum threshold for tree size set out in BS5837:2012.

4.1.3 The proposed layout will entail the loss of two category C tree groups (TG2 and TG3). In critically grading the trees to make informed decisions on the retention and removal decisions the emphasis is on the loss of lower quality trees to enable the retention of better-quality trees. The loss of category C tree groups, being trees of low quality, is in line with this process.

4.1.4 All other trees will be retained.

4.2 Construction in Root Protection Areas

4.2.1 Construction is proposed in the RPAs of TG1. This instance consists of the removal of the existing fence and the installation of a new 2.4m high metal boundary fence.

4.2.2 The new metal railing fence crosses through the Northern edges of the RPAs of TG1 at a distance of 2m from the tree stems. Localised excavation will be required for the posts, but a trench will not be required. The distance of the excavations from the trees means structurally significant roots are highly unlikely to be present. The excavations can be carried out by hand and, provided proper ground protection is put in place during works there will not to be any significant harm to the trees that compromises their structural integrity or long-term health.

4.2.3 BS 5837 recommends, in section 7.4, that new hard surfacing within RPA's be constructed using methods that minimize the impact on the affected tree(s) and cover no more than 20% of the open ground within the RPA. In this proposal there are no proposed increases in hard surfaces within the RPA of any retained trees.



4.3 Pruning works to facilitate development.

4.3. Pruning is required to raise the crowns of the 3rd party trees within TG1 and TG4 to install the new boundary fencing. The species within these groups are well suited to withstand the pruning works that this would entail.

4.4 Proximity of trees and structures.

4.4.1 Due to the nature of the site usage, light industrial, there are no significant issues relating to tree shading that need to be considered.

4.4.2 Due to the height and nature of the retained trees, relatively low growing, the existing installed drainage/guttering of the building as well as the height of the existing building there are no foreseeable issues related to drainage and tree leaves/debris.

4.5 Tree protection during construction.

4.3.1 Trees can be irreparably and unwittingly damaged in a few minutes during construction. Accordingly a tree protection scheme should be prepared in accordance with the guidance of BS 5837 for the proposal to ensure the successful long-term retention of the tree on the adjacent property (Appendix 2).

4.4 Arboricultural Method Statement

4.4.1 The increased hard standing and fencing installation have the potential to cause harm to retention trees if constructed using conventional techniques. Therefore the methods for installing hard surfaces and for excavations in RPAs recommended in BS5837 should be followed. Suggested methodologies should be provided as part of the tree protection plan at a later stage.

5 SUMMARY & CONCLUSION

5.1 The proposal includes the loss of approximately 23 trees split amongst two tree groups; All of these are trees of low quality. The loss of the low-quality trees is in accordance with the use of grading detailed in BS5837 to differentiate between trees enabling informed decisions on tree removal on the basis of quality.

5.2 Some very minor construction and remedial work is proposed within the root protection area of retention trees. This work is not particularly complex and within the recommendations of BS5837. An arboricultural method statement should be prepared to ensure the proposals are arboriculturally acceptable. As the works are minimal in impact and not particularly complex I suggest the presentation of the arboricultural method statement can reasonably be conditioned.

5.3 A tree protection plan should be prepared to ensure the successful prevention of harm to the retention trees during construction and therefore the long-term retention.

5.4 Given the above I am satisfied the proposal is workable and arboriculturally acceptable.

Hugh Wilson

Hugh Wilson MSc BSc M.Arbor A.
Director

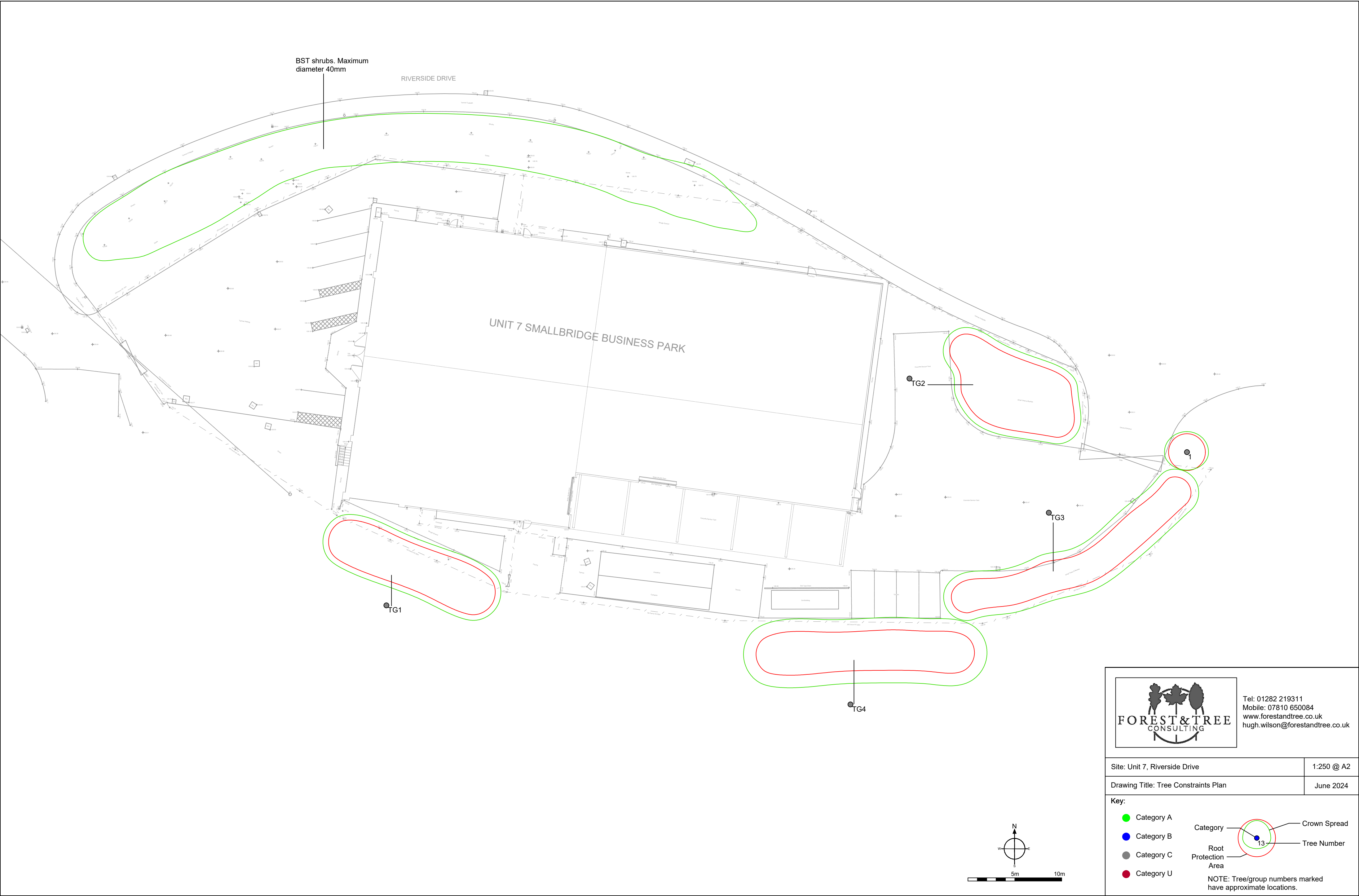


6 APPENDICES

APPENDIX 1

TREE RETENTION & REMOVAL PLAN

Note this drawing is scaled for printing at A3 and is intended to be read in colour



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Site: Unit 7, Riverside Drive 1:250 @ A2

Drawing Title: Tree Constraints Plan June 2024

Key:

● Category A

● Category B

● Category C

● Category U

Category

Root Protection Area

Crown Spread

Tree Number

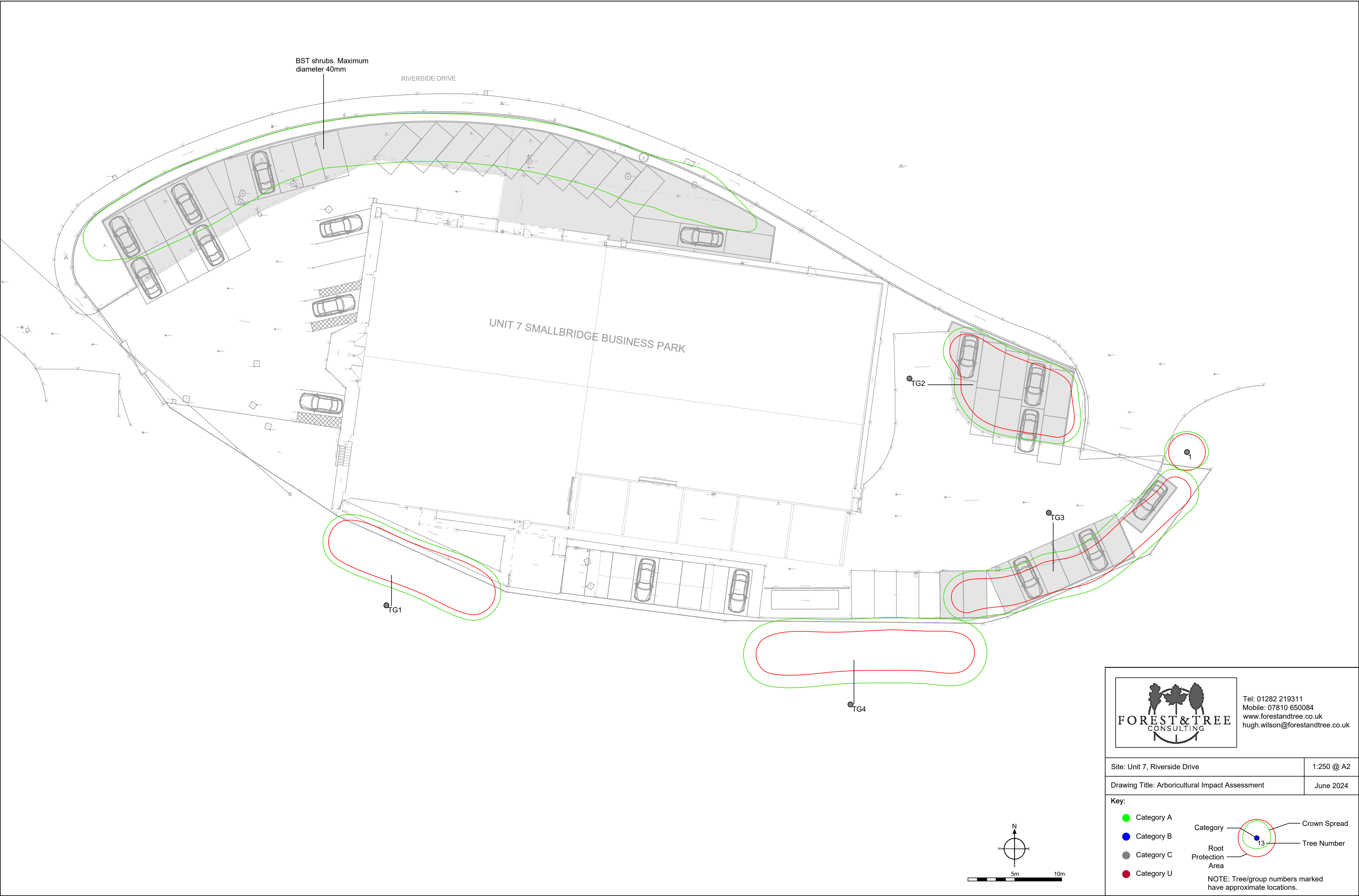
NOTE: Tree/group numbers marked have approximate locations.



APPENDIX 2

ARBORICULTURAL IMPACT ASSESSMENT

Note this drawing is scaled for printing at A3 and is intended to be read in colour





APPENDIX 3

Brief qualifications and experience of Hugh Wilson

1. Qualifications
 - a. MSc Forest Ecology and Management – University of Edinburgh
 - b. BSc hons (2:1) Environmental Science – University of Nottingham
 - c. Professional Tree Inspection
2. Practical experience
 - a. Southwick Arboriculture Ltd: Tree care operative
 - b. Marishal Thompson Ltd: Tree Surveyor/Assistant Arboriculturalist
 - c. ADAS Ltd: Vegetation Management/Wayleave Surveyor
 - d. Forest & Tree Consulting Ltd: Director/Principle Consultant
3. Continuing Professional development:

Forest & Tree Consulting Ltd is committed to continuing professional development to ensure all staff continue to learn and develop throughout their careers so they keep their skills and knowledge up to date and are able to work safely, legally and effectively.

Sample pf the seminars and conferences attended:

 - Practitioners guide to Visual Tree Assessment
 - Arboriculture Association conference 'New Horizons in Arboriculture'
 - Visual Tree Assessment, Tree Safety Diagnosis and Failure Analysis seminar by Dr. Claus Mattheck
 - The Institute of Chartered Foresters' conference Trees, People & the Built Environment
4. Membership of professional bodies:
 - a. Professional member of the Arboricultural Association
 - b. Associate member of the Institute of Chartered Foresters
 - c. Member of the Royal Forestry Society
 - d. Member of the Royal Scottish Forestry Society