

**ARBORICULTURAL BS5837:2012 SURVEY
AND REPORT FOR DEVELOPMENT
PURPOSES**
at
**16B Park Drive
Bradford
West Yorkshire
BD9 4DR**

Client:

Tractus Architectural Design

Client Address:

Headfield Business Centre
Headfield Mills
Savile Road
Dewsbury
WF12 9LQ

Client Telephone:

01924 462550

JCA Ref:

20380/AM

JCA Limited

Arboricultural & Ecological Consultants

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1. Introduction

1.1 Purpose of the Report

- 1.1.1 JCA Limited has been instructed by **Tractus Architectural Design** to survey the trees at **16B Park Drive, Bradford, BD9 4DR** and prepare the findings in a report.
- 1.1.2 This report provides detailed, independent, arboricultural advice on the trees in the context of potential development, conducted in accordance with the guidelines contained within BS5837: 2012 '*Trees in relation to design, demolition and construction – Recommendations*' (BS5837:2012).
- 1.1.3 This report will categorise the trees in accordance with the British Standard, which will help guide the design of potential development in terms of constraints and opportunities related to trees, and provide details of which trees should be retained and which could be removed.
- 1.1.4 Once a proposed development scheme has been formalised, the full implications for trees should be assessed within an Arboricultural Impact Assessment (AIA).
- 1.1.5 Where necessary, recommendations will be given with a view to the long-term management of sustainable tree cover and to uphold the interests of health and safety.

1.2 Terms of Reference

- 1.2.1 For this purpose, a topographical survey has been supplied, which forms the basis for the Tree Constraints Plan at **Appendix 5**. The topographical survey, along with all other documents supplied to JCA, is assumed to be correct. No checking of such documents will be undertaken and JCA cannot be held responsible for incorrect data supplied by other parties.

1.3 Tree Survey Details and Methodology

- 1.3.1 The survey took place during **March 2023** and was conducted by **Andrew McPhaden BSc (Hons)**.
- 1.3.2 During this survey, all trees were inspected from ground level. Further investigations, such as a climbed inspection or a decay detection survey, have not been undertaken.
- 1.3.3 Only those trees within the site boundary with a stem diameter above 75mm have been included. Where applicable, trees outside the site boundary, but close enough to be affected by a proposed development, are also included.

- 1.3.4 Tree data was collected in accordance with **Sections 4.4 and 4.5** of BS5837: 2012. Full details of all trees surveyed are recorded in the tables at **Appendix 1** which can be cross referenced with the Tree Constraints Plan at **Appendix 5**. A full explanation of the tables can be found at **Appendix 2**.
- 1.3.5 Measurements were obtained using clinometers, specialist tapes or electronic distometers. Where this was not possible, due to restricted access or other mitigating circumstances, measurements were estimated to the best ability of the surveyor. Where measurements have been estimated, these are clearly highlighted at **Appendix 1** with a ‘#’ symbol.

2. Status of the Trees

- 2.1 A check was made with *City of Bradford Metropolitan District Council* in **March 2023** to determine whether any of the trees surveyed as part of this report are subject to any statutory controls.
- 2.2 We are informed that all trees surveyed are located within the **Heaton Estates Conservation Area**.
- 2.3 Before any work is organised to trees within a Conservation Area with a stem diameter of 75mm or greater, a Section 211 Notification (Notice of Intent) must be submitted to the Local Authority, outlining all the proposed works along with a suitable justification. The Local Authority have a six week period to determine whether or not to afford the trees with further protective status. If, after this timescale the Local Authority does not wish to allocate a Tree Preservation Order (TPO), the works may commence as notified.
- 2.4 **No work must be done to any tree within the Conservation Area with a stem diameter of 75mm or greater until the above process has been completed and the trees have not been allocated with a TPO.**
- 2.5 Prior to any works being undertaken to trees, those instructing and proposing to carry out the work should satisfy themselves that all appropriate consents are in place to prevent potential breach of legislation.

3. Tree Survey Details

3.1 Tree Retention Categories

3.1.1 Below is a summary of the surveyed vegetation with retention categories identified in accordance with BS5837: 2012. For a full explanation of the retention categories, please refer to **Appendix 2 (Section A2.3)**.

Retention Categories of the Surveyed Vegetation			
Retention Category	Trees	Groups	Totals
A	0	0	0
B	9	2	11
C	8	1	9
U	1	0	1
Totals	18	3	21

- 3.1.2 As a general rule, those trees listed as retention category ‘A’ or retention category ‘B’ are the most valuable items of vegetation and as such the removal of these is likely to be met with resistance by the Local Planning Authority (LPA).
- 3.1.3 Those items listed as retention category ‘C’ are of lesser value and the removal of these is generally less likely to be met with resistance by the LPA.
- 3.1.4 Items listed as retention category ‘U’ comprise of dead trees or trees of limited safe life expectancy and are often recommended for removal, irrespective of any proposals.
- 3.1.5 The above information should guide the design in terms of which trees could be removed and which trees should be retained. However, due to changing attitudes with regards to environmental awareness, it should be noted that all trees are considered to have value. As such, it is advised that as many trees as possible be retained, regardless of their BS5837: 2012 retention category status. The retention of trees is further advised to avoid the need to plant replacement specimens, which are usually required to be planted on a 2:1 or 3:1 ratio, and due to their ecological value, which will be assessed as linear habitat units within Biodiversity Metric 3.1.

3.2 Recommended Work for Arboricultural Reasons

3.2.1 Where necessary, recommendations have been prescribed for reasons of public safety, to benefit the trees and/or for general maintenance purposes. Such recommendations have been made for Arboricultural reasons and should be undertaken irrespective of development, as follows.

Arboricultural Recommendations				
Ref Number	Species	Height (m)	Stem Diameter (cm)	Recommendations
T3	Common Ash	17	57, 49	Remove deadwood. Reinspect biennially.
T5	Wild Cherry	4	40	Remove.
T7	Goat Willow	14	63	Reduce northern stem by 2m.
T13	Sycamore	18	41, 31	Reinspect biennially.
T14	Sycamore	18	52	Reinspect biennially.
T15	Sycamore	18	65, 49	Reinspect biennially.

3.2.3 Full details of all recommended works are detailed in the 'Recommendations Column' of the Tree Data Tables at **Appendix 1**.

3.2.4 For an explanation of the priority ratings, see **Appendix 2 (A2.2.5)**.

3.2.5 All trees which are to be retained within the proposed development should be inspected on a regular basis in the interests of risk management. They should have a biennial re-inspection regime, ideally with each inspection being undertaken during a different season, in order to observe any defects, pests and diseases that are only evident at certain times of year.

4. Tree Related Design Advice

- 4.1 The location of each tree is plotted on the Tree Constraints Plan at **Appendix 5**. The canopy spread of each surveyed item is colour coded as follows; Retention Category A: **Green**, Retention Category B: **Blue**, Retention Category C: **Grey**, Retention Category U: **Red**. The associated Root Protection Area (RPA) is also shown in **Gold**.
- 4.2 In order to enable the survival of trees shown to be retained within any proposals, encroachment into the canopy of the tree and/or its RPA should be avoided wherever possible. This relates to not just the location of new buildings, but also to the location of new areas of hard standing, proposed utility routes and any ground level changes (both excavations and soil piling). Where this is not possible, specialist construction methods and materials will need to be used.
- 4.3 Where information is available, the water demand of each tree is provided at **Appendix 1**, in accordance with NHBC Standards 2019 chapter 4.2. 'Building near trees'. The water demand of trees can affect adjacent structures, and this is therefore included to inform foundation design, depth and the proximity of proposed structures to trees.
- 4.4 Retained trees will require adequate protective measures during development. Such measures typically entail temporary protective fencing, installed to the full extent of the RPA. Where this is not entirely possible, ground protection may also comprise part of the protective measures. This includes a compaction reducing construction detail which enables a degree of construction traffic over/within the RPA.
- 4.5 As the RPAs of the trees will require fencing off as a protection measure, this should be brought into consideration when planning such things as access routes and material storage during development. It is accepted that in some cases it is not entirely possible to completely avoid the RPA or canopy lines within a new development. The consulting arboriculturalist should therefore be made aware of any such incursions to make comment and, where possible, advise on mitigation actions. Such details should be contained within an Arboricultural Impact Assessment (AIA).
- 4.6 No material storage is permitted within the RPA of retained trees unless confirmed to be acceptable by the consulting arboriculturalist. The exact details and location of protective measures should be included within an Arboricultural Method Statement (AMS).
- 4.7 The position of the site compound is a major consideration. It is recommended that this, which typically includes the site office, facilities, toilets, storage of materials and parking, is located away from trees and outside the RPA.
- 4.8 Any shade that may be cast by the retained trees must also be considered. Where buildings are to be positioned within the shade cast area of trees, these should be designed in order to maximise light levels.

- 4.9 Many development sites contain areas of nature conservation interest. Trees and hedgerows, in particular, can provide an important habitat for birds, bats, invertebrates and fungi and appropriate attention needs to be paid to preserving habitats throughout the development process.
- 4.10 If a landscape planting scheme is proposed, consideration must be made at the planning stage as to where this is to be implemented on site. Such locations should be protected in order to prevent soil compaction and/or contamination and should therefore form part of the Construction Exclusion Zone.
- 4.11 Once the development proposals are finalised, the implications of this design on the existing trees should be assessed within an Arboricultural Implications Assessment (AIA).

5. Summary

- 5.1 The trees at **16B Park Drive, Bradford** have been surveyed in accordance with BS5837: 2012 in order to provide independent advice relating to the constraints posed by trees to the potential development of the site.
- 5.2 The site is situated in the Heaton Estates Conservation Area. Prior to any works being undertaken to protected trees, those instructing and proposing to carry the work should satisfy themselves that all appropriate consents are in place to prevent potential breach of legislation.
- 5.3 Recommendations have been prescribed for reasons of public safety, to benefit the trees and/or for general maintenance purposes. Such recommendations have been made for Arboricultural reasons and should be undertaken irrespective of development.
- 5.4 General tree related advice to assist the design proposals has been provided in **Section 4**, which should be used in conjunction with the Tree Constraints Plan at **Appendix 5**.
- 5.5 Upon provision of specific proposals, site-specific advice should be given with regards to the impact on trees. In accordance with **Section 5.4** of **BS 5837: 2012**, the next stage should be the preparation of an **Arboricultural Impact Assessment (AIA)**, which will illustrate and discuss the impact of the proposals on the trees.
- 5.6 The data gained during the survey provides an indication of the health of the trees. However, it does not enable a comprehensive assessment of their condition over time. Trees are living organisms which are affected by many factors including weather conditions, diseases/disorders, light levels and human activities. Due to this, this report is only valid for a period of 1 year from the date of issuing. Should an update or revision of this report be required outside of this time period, JCA may require a further site visit to ensure that the condition of the trees has not significantly changed. It is advised that the trees are inspected regularly, in the interests of risk management.

Appendices

Tree Ref.	Age	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread			Observations	Recommendations		Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
	Common Name					Botanical Name	N	W		E	Priority						
T 1	Semi-mature Pear	3.5	1	0.5 W	8	1.4 1	2.3	1.7	Single-stemmed and leaning with an unbalanced crown. Some broken branches noted. Historically maintained height and spread.	No action required.	GOOD	FAIR	MOD	MOD	20+	C 1	
G 2	Young to Semi-mature Mixed Species	To 7	1	NA	To 17	See Plan			2 Purple Plum and 1 Wild Cherry. Stubs from historic crown lifting over boundary. Historically maintained height and spread.	No action required.	GOOD	FAIR	MOD	MOD	20+	B 2	
T 3	Mature Common Ash	17	4	6 N	57, 49	9 8.1	7.8	8.9	Double-stemmed at 1m and vertical with a slightly asymmetric crown. Overhanging site boundary and neighbouring property. Included main union in acceptable condition at present. Old metal fence occluding into main stem from 0-2m. Buttressing causing adjacent steps to move. Moderate deadwood in central crown noted.	Remove deadwood. Reinspect biennially.	GOOD	GOOD	MOD	MOD	20+	B 1	
T 4	Mature Sycamore	17	2.5	4 E	76	7.3 3.4	8.2	7.3	Double-stemmed at 2m and vertical with an unbalanced crown. Multiple stubs and large pruning wounds from historic crown lifting over house. Some epicormic growth around pruning wounds on the stem.	No action required.	GOOD	GOOD	MOD	MOD	20+	B 1	
T 5	Mature Wild Cherry	4	NA	NA	40	See Plan			Dead stem. Crown has been removed. Stem has been girdled.	Remove.	DEAD	DEAD	DEAD	MOD	Dead	U	
T 6	Mature Wild Cherry	8	2	4.5 S	22, 21	2.5 8.7	1.9	2.6	Double-stemmed at 1m and vertical with an unbalanced crown. Overhanging site boundary and neighbouring property. Multiple stubs and large pruning wounds from historic crown lifting over neighbouring property. Epicormic growth around wounds forming the lower crown.	No action required.	FAIR	POOR	LOW	MOD	10+	C 1	
T 7	Mature Goat Willow	14	1.5	3 W	63	7.2 7.1	7.3	3	Triple-stemmed at 2m and vertical with an unbalanced crown. 3rd party tree overhanging site boundary. Multiple included unions noted. Multiple stubs and pruning wounds from historic crown lifting over site and neighbouring property. Multiple tear wounds on the western side of the crown. Moderate deadwood noted.	Reduce northern stem by 2m.	GOOD	FAIR	MOD	HIGH	20+	C 1	
G 8	Semi-mature to Early-mature Sycamore	15	2	NA	To 32	See Plan			3 specimens all single stemmed and slightly leaning forming a homogeneous crown. 3rd party vegetation rooted onto a retaining wall and overhanging site boundary.	No action required.	GOOD	GOOD	MOD	MOD	20+	B 2	

Tree Ref.	Age Common Name Botanical Name	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread			Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
						N	W	E								
T 9	Early-mature Wild Cherry <i>Prunus avium</i>	8	3	5 S	26	0	0	4.5	Single-stemmed with a slight lean and an unbalanced crown. Suppressed by G8 . Multiple large pruning wounds from historic crown lifting over garden and site boundary. Multiple exposed and damaged roots noted.	No action required.	FAIR	POOR	LOW	MOD	10+	C 1
T 10	Mixed Species Wild Cherry <i>Prunus avium</i>	8	3	2 E	38	3.2	2.6	2.9	Single-stemmed and vertical with an unbalanced crown. Suppressed by T9 and overhanging site boundary. Multiple large pruning wounds from historic crown lifting over garden and site boundary. Epicormic growth from pruning wounds forming the lower crown.	No action required.	FAIR	POOR	LOW	MOD	10+	C 1
T 11	Semi-mature Japanese Maple <i>Acer palmatum</i>	3	0.5	1 E	8, 6, 5	1.3	1.5	1	Triple-stemmed at ground level and vertical with a balanced crown. Multiple stubs and large pruning wounds. Historically maintained height and spread. Some minor stem wounds noted.	No action required.	FAIR	FAIR	LOW	MOD	10+	C 1
T 12	Young Western Red Cedar <i>Thuja plicata</i>	7	1.5	NA	15	2.7	2.6	2.8	Single-stemmed and vertical with a balanced crown. 3rd party tree overhanging site boundary. Minor stem wound to the south.	No action required.	GOOD	GOOD	MOD	MOD	40+	B 1
T 13	Early-mature Sycamore <i>Acer pseudoplatanus</i>	18	2.5	4.5 N	41, 31	8.4	6.1	4.3	Double-stemmed at ground level and vertical with an unbalanced crown. Included main union in acceptable condition at present. Large wound on the eastern stem from 1-5m with some callus wood forming. Another wound at 7m from historic breakout limb at an included union also exhibiting callus wood. Minor wound on the western stem showing callus wood. Minor deadwood noted and some potential squirrel damage to lower limbs.	Reinspect biennially. Moderate	GOOD	FAIR	MOD	MOD	20+	1 B 2
T 14	Mature Sycamore <i>Acer pseudoplatanus</i>	18	7	5 N	52	7.8	4.8	3.6	Single-stemmed and vertical with an unbalanced crown. Overhanging site boundary. Large wound from 0-3.5m. Peeling bark showing further spread of decay from the top of this wound further up the stem. Historic callus wound has died in places with new callus wood forming over the top. Historic pruning wounds occluding well. Minor deadwood overhanging garden.	Reinspect biennially. Moderate	GOOD	FAIR	MOD	MOD	20+	1 B 2

Tree Ref.	Age Common Name Botanical Name	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread			Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
						N	W	E								
T 15	Mature Sycamore <i>Acer pseudoplatanus</i>	18	5	5 S	65, 49	8 5.5		7	Double-stemmed at 0.5m and vertical with a slightly asymmetric crown. Overhanging site boundary. Large wound on the western stem from 0.5-3.5m. Peeling bark showing further spread of decay from the top of this wound further up the stem. Historic callus wound has died in places with new callus wood forming over the top. Moderate deadwood noted.	Reinspect biennially. Moderate	GOOD	FAIR	MOD	MOD	20+	B 1 B 2
T 16	Mature Deodar Cedar <i>Cedrus deodara</i>	16	1	5 SE	43	4.9 3.6		4 # 4.7	Double-stemmed at 0.5m and vertical with a balanced crown. 3rd party vegetation overhanging site boundary. Lightly Ivy clad to 7m.	No action required.	GOOD	GOOD	MOD	MOD	20+	B 1
T 17	Semi-mature Monterey Cypress <i>Cupressus macrocarpa</i>	10	1.5	NA	20	2.8 2.5		3 # 2.2	Single-stemmed and vertical with a slightly asymmetric crown. 3rd party vegetation overhanging site boundary. Stubs from historic crown lifting over neighbouring property and boundary.	No action required.	GOOD	GOOD	MOD	HIGH	20+	B 1
G 18	Early-mature to Mature Lawson Cypress <i>Chamaecyparis lawsoniana</i>	To 8	0	NA	To 15	See Plan			3 trees in group all multi-stemmed at ground level. Historically reduced. Some broken and dead limbs noted.	No action required.	GOOD	POOR	MOD	HIGH	10+	C 2
T 19	Early-mature Holly <i>Ilex aquifolium</i>	11	0	3.5 SE	22, 21, 16, 13	2.6 4.4		3 # 2.9	Multi-stemmed at ground level and vertical with a slightly asymmetric crown. 3rd party vegetation rooted in a retaining wall. Dense crown and multiple included unions.	No action required.	GOOD	FAIR	MOD	LOW	10+	C 1
T 20	Mature Deodar Cedar <i>Cedrus deodara</i>	16	3	4 S	40, 35 #	5.7 4.6		5.5 # 5.6	Double-stemmed at ground level and vertical with a slightly asymmetric crown. 3rd part vegetation rooted in a raised bed below a retaining wall. Stubs from historic crown lifting over neighbouring property.	No action required.	GOOD	GOOD	MOD	MOD	20+	B 1
T 21	Semi-mature Rhododendron <i>Rhododendron sp.</i>	4	1.5	1.5 E	14	1 1.3		1	Single-stemmed and vertical with a slightly asymmetric crown. Historically reduced with multiple stubs and pruning wounds.	No action required.	POOR	FAIR	LOW	NO DATA	10+	C 1

Appendix 2: Explanation of Tree Descriptions

A2.1 Measurements/ Reference Information

- A2.1.1 *REF NUMBER*. All items surveyed are allocated a reference number preceded with a letter, identifying the type of vegetation surveyed: T = an individual tree, G = a group of trees or an area of vegetation, W = woodland, H = a hedgerow.
- A2.1.2 *SPECIES: COMMON AND BOTANICAL NAME*. The common and botanical names of the species present are noted. If the species is not clear or identifiable, then a general common name and genus will be noted.
- A2.1.3 *AGE CLASS* of the tree is described as young, semi-mature, early-mature, mature, over-mature, veteran or dead.
- A2.1.4 *HEIGHT* of the tree is measured in metres from the stem base to the top of the crown.
- A2.1.5 *CROWN HEIGHT* is an indication of the height above ground level at which the crown begins.
- A2.1.6 *STEM DIAMETER* is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; diameter measurements are taken for each stem. If more than five stems are present, an average stem diameter is taken. If for whatever reason it is not practical to measure multiple-stemmed trees in this way, the diameter is measured close to ground level, just above the root buttress.
- A2.1.7 *CROWN SPREAD* is measured from the centre of the stem base to the tips of the branches to all four cardinal points.
- A2.1.8 *HEIGHT AND DIRECTION OF LOWEST BRANCH*. The height and direction of the lowest significant branch is noted because of potential issues relating to clearances and the need for tree pruning.
- A2.1.9 *NHBC WATER DEMAND*. The water demand of each tree, as listed in NHBC Standards 2010 Chapter 4.2 'Building near trees'. This is included to aid structural engineers, architects and other members of the design team as it determines foundation depth and other considerations with regard to trees.

A2.2 Evaluations

A2.2.1 *PHYSIOLOGICAL CONDITION* is classed as good, fair, poor, or dead. This is an indication of the health and vitality of the tree and takes into account vigour, presence of disease and dieback.

A2.2.2 *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.

A2.2.3 *LIFE EXPECTANCY* is classed as; Dead, less than 10 years, 10+ years, 20+ years, or 40 + years. This is an indication of the minimum number of years before removal of the tree is likely to be required.

A2.2.4 *AMENITY VALUE*. A general indication is given in respect to the amenity/landscape value of the tree/group within the surrounding area.

A2.2.5 *PRIORITIES*. A priority rating is given concerning the time periods in which the recommended works should be undertaken. LOW priority works should be undertaken within 12 months of the survey, MOD (moderate) priority works should be undertaken within 6 months and HIGH priority works should be completed as soon as practically possible. If no works are recommended, N/A (not applicable) will be used.

A2.3 Retention Categories

A2.3.1 *A = Trees of high quality.*

These trees will be shown in **green** on the Tree Constraints Plan and are of high quality and value with a good life expectancy (usually with an estimated remaining life expectancy of 40 years).

A2.3.2 *B = Trees of moderate quality.*

These trees will be shown in **blue** on the Tree Constraints Plan, are of moderate quality and value with a reasonable life expectancy (usually with an estimated life expectancy of at least 20 years).

A2.3.3 *C = Trees of lower quality.*

These trees will be shown in **grey** on the Tree Constraints Plan are of low quality and value but which are in adequate condition to remain or are young trees with a stem diameter below 15cm (usually with an estimated life expectancy of at least 10 years).

A2.3.4 Trees categorised as retention category 'A', 'B' or 'C' are then justified by being further divided into 3 subcategories:

1 = Mainly arboricultural qualities.

2 = Mainly landscape qualities.

3 = Mainly cultural values, including conservation value.

A2.3.5 U (marked in red on the Tree Constraints Plan) = Trees usually unsuitable for retention due to poor condition.

These trees will be shown in **red** on the Tree Constraints Plan, are in such a condition that they cannot be realistically retained as living trees in the context of the current land use for longer than 10 years. This may be due to any of the following:

- 1) Failure is likely due to serious, irredeemable, structural defects.
- 2) Removal of other category U trees will render them exposed and unstable.
- 3) They are in serious, overall decline or are dead.
- 4) They are of low quality and suppressing adjacent trees of better quality.
- 5) Diseases are present which may affect the health of adjacent trees.

These trees are to be removed or managed in a way which reduces their risk of failure, where they have high ecological value, such as in a woodland setting.

Appendix 3: General Guidelines

- A3.1 All tree work should be undertaken to BS 3998: 2010 '*Recommendations for tree work*' or other recognised industry practice.
- A3.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors. They should be covered by adequate public liability insurance.
- A3.3 This report is based upon a visual inspection. The consultant 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 the guidelines and the terms listed therein.
- A3.4 Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.
- A3.5 No liability can be accepted by JCA in respect of the trees unless the recommendations of this report are carried out under the supervision of JCA and within JCA's timescale.
- A3.6 It is advisable to have trees inspected by an arboricultural consultant on a regular basis.

Appendix 4: Author Qualifications

Principal Consultant and Managing Director

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 31 years' experience in the Arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. Jonathan has since developed JCA's portfolio of services and its extensive client base. He is a Chartered Biologist, a Chartered Arboriculturalist and an Expert Witness with much experience of litigation work.

Technical Director

Toby Thwaites *BSc (Hons), HND (Arboriculture), MArborA.* Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield and has since graduated in Arboriculture at the University of Central Lancashire. A former JCA team leader and Consulting Arboriculturist, Toby is now Technical Director and oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Operations Director

Charles Cocking *FdSc (Arboriculture), MArborA.* Charles joined JCA in January 2014 having previously worked for the company on a part time basis during 2013. Charles obtained his Foundation Degree in Arboriculture at Askham Bryan College, York, and is a Professional Member of the Arboricultural Association. Charles now oversees all internal operations for the company.

Consulting Staff: Arboriculture

Andrew Bussey. Andrew started working in consultancy at JCA in 2006 having spent 12 years working as an arborist for various private companies before joining a Local Authority forestry team. He has various NPTC qualifications, is QTRA qualified and is a LANTRA Accredited Professional Tree Inspector.

Emily Wilde *FdSc (Arboriculture).* Emily joined JCA having previously worked for various private tree surgery and consultancy companies over the past 8 years. She initially obtained a ND in Forestry & Arboriculture, followed by a FdSc in Arboriculture at Askham Bryan College, York. Emily has various NPTC certificates and is QTRA qualified.

Mick Eltringham *ND (Forestry).* Mick joined JCA after spending 12 years working in the industry for various private companies in the north and south of England. He has also spent the last five years working as a consultant for two canopy research projects in the Amazon Rainforest, working with Oxford University and the University of Arizona. He has various NPTC Qualifications.

Dan Kemp *FdSc (Arboriculture).* Dan joined JCA with nearly 30 years' experience in arboriculture. He worked as a London Tree Officer for 12 years and in several arboricultural and horticultural management posts, specialising particularly in tree risk assessments and tree related subsidence.

Luke Wickham *FdSc (Arboriculture and Urban Forestry).* Luke joined JCA in 2021 after obtaining his Foundation Degree in Arboriculture and Urban Forestry at Askham Bryan College. Having previously worked within the industry for the past 4 years, running his own small business and sub-contracting for local firms, Luke brings a sound knowledge and understanding of the practical and academic sides of the industry.

Andrew McPhaden *BSc (Hons).* Andrew joined JCA in 2022 having spent 5 years working as an Arborist for various private companies in both the UK and Germany. During his time abroad he obtained the European Tree Worker Certification along with a tree inspector certification from the Forschungsgesellschaft Landschaftsentwicklung Landschaftsbau. He brings a strong understanding of the practical sides of the industry and holds various NPTC qualifications.

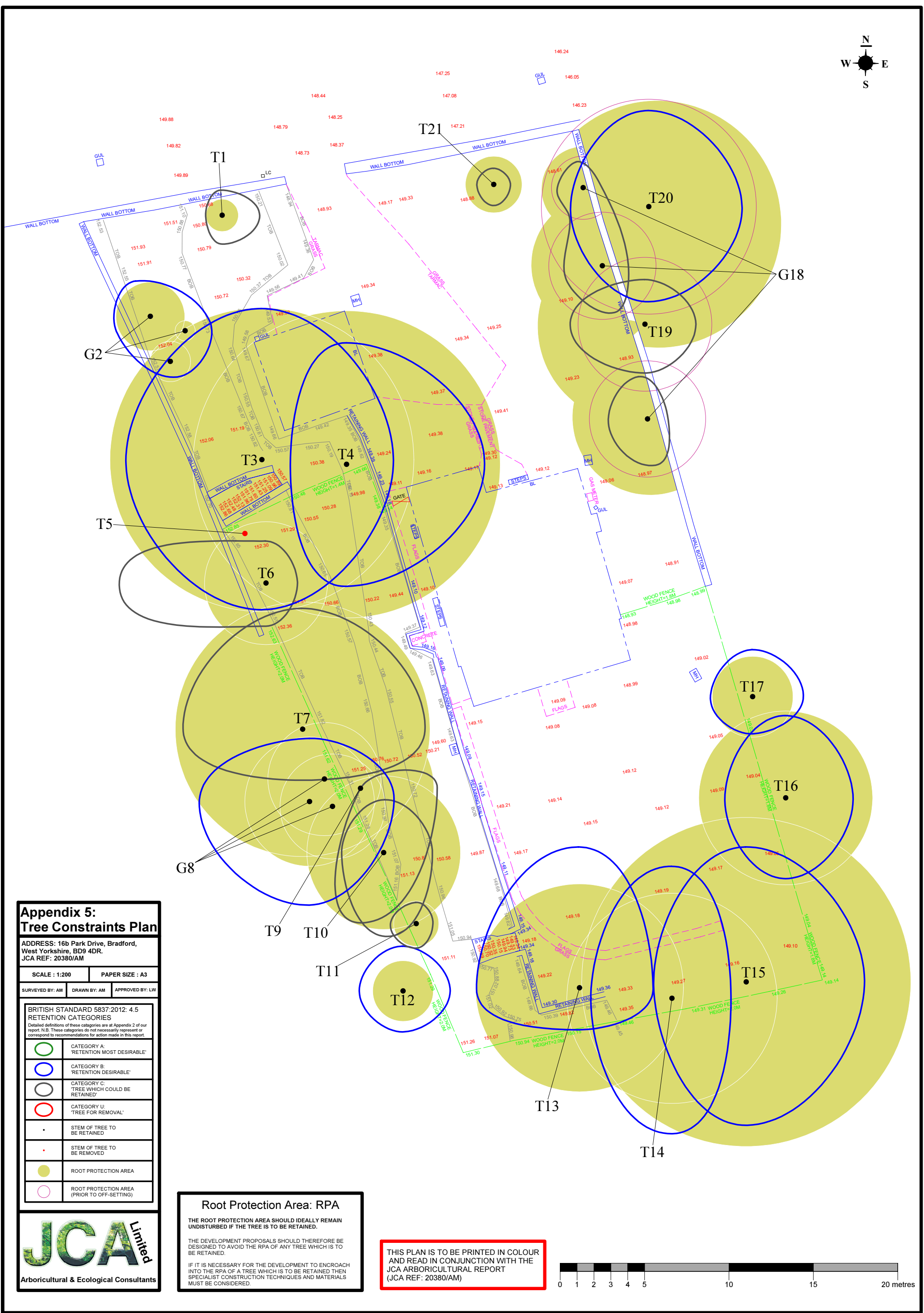
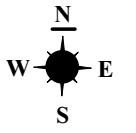
Consulting Staff: Ecology

Adam West, Principal Ecologist *BSc (Hons) Animal and Wildlife Management*. Adam joined JCA to lead the expanding ecology department. Having returned to education as a mature student, Adam studied Countryside Management for two years before undertaking a Bachelor's degree, for which he was awarded First Class Honours. Adam has many years' experience in ecological consultancy, working on projects ranging from individual planning applications to national infrastructure projects. Adam holds a Natural England Level 1 great crested newt survey class licence, a Natural England Level 2 bat survey class licence (and the Scottish and Welsh equivalents) and a CSCS card.

Administrative Staff

Catherine Cocking Accounts Manager.
Kelly Saunders Accounts Assistant.

Lorraine Spink Administrative Assistant.
Lisa Beedham Marketing Manager.



**Appendix 5:
Tree Constraints Plan**

ADDRESS: 16b Park Drive, Bradford,
West Yorkshire, BD9 4DR.
JCA REF: 20380/AM

SCALE: 1:200 PAPER SIZE: A3

SURVEYED BY: AM DRAWN BY: AM APPROVED BY: LW

BRITISH STANDARD 5837:2012: 4.5
RETENTION CATEGORIES

Detailed definitions of these categories are at Appendix 2 of our report. N.B. These categories do not necessarily represent or correspond to recommendations for action made in this report.

	CATEGORY A: 'RETENTION MOST DESIRABLE'
	CATEGORY B: 'RETENTION DESIRABLE'
	CATEGORY C: 'TREE WHICH COULD BE RETAINED'
	CATEGORY U: 'TREE FOR REMOVAL'
	STEM OF TREE TO BE RETAINED
	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA
	ROOT PROTECTION AREA (PRIOR TO OFF-SETTING)



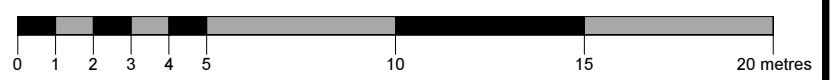
Root Protection Area: RPA

THE ROOT PROTECTION AREA SHOULD IDEALLY REMAIN UNDISTURBED IF THE TREE IS TO BE RETAINED.

THE DEVELOPMENT PROPOSALS SHOULD THEREFORE BE DESIGNED TO AVOID THE RPA OF ANY TREE WHICH IS TO BE RETAINED.

IF IT IS NECESSARY FOR THE DEVELOPMENT TO ENCROACH INTO THE RPA OF A TREE WHICH IS TO BE RETAINED THEN SPECIALIST CONSTRUCTION TECHNIQUES AND MATERIALS MUST BE CONSIDERED.

THIS PLAN IS TO BE PRINTED IN COLOUR AND READ IN CONJUNCTION WITH THE JCA ARBORICULTURAL REPORT (JCA REF: 20380/AM)



I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed



Andrew McPhaden *BSc (Hons)*.

11th April 2023

For and on behalf of *JCA Ltd*

Registered Office

**Unit 80
Bowers Mill
Branch Road
Barkisland
Halifax
HX4 0AD**

Tel: 01422 376335

Fax: 01422 376232

Email: info@jcaac.com

www.jcaac.com

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JCA Ltd. Arboricultural and Ecological Consultants

Professional Tree and Ecology Advice nationwide

ARBORICULTURAL SERVICES

Guidance for Architects and Developers

- British Standard 5837 Tree Surveys
- Arboricultural Implication Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected Species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)

HEAD QUARTERS:

Unit 80 Bowers Mill,
Branch Road,
Barkisland,
Halifax, HX4 0AD.

Tel: 01422 376335
Mobile: 07778 391986
Email: jon@jcaac.com
Website: www.jcaac.com

