ARBORICULTURAL IMPACT ASSESSMENT
to BS 5837:2012
at
Council Depot & Offices
St Pauls Road
Mirfield
West Yorkshire
WF14 8AX

Client:
Brewster Bye Architects

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JCA Ref:
14607-A/AJB

JCA Limited
Arboricultural & Ecological Consultants

Contents

1. Introduction

1.1 Purpose of the Report

1.1.1 This Arboricultural Impact Assessment is required in relation to the proposed development at **Council Depot & Offices**, **St Pauls Road**, **Mirfield**.

1.1.2 The purpose of this report is to assess the impact of the proposals on the existing tree stock and outline mitigation actions, where appropriate, to minimise potential damage to retained trees.

1.2 Terms of Reference

1.2.1 JCA Ltd has been instructed by **Brewster Bye Architects** to prepare an Arboricultural Impact Assessment, based on our Arboricultural Report dated 21st December 2018 (JCA Ref: **14607/AJB**). The arboricultural survey and report conforms to the most recent specifications outlined in BS 5837: 2012 Trees in relation to design, demolition and construction - Recommendations.

1.2.2 I have been supplied with **Drawing No. (02) 011 Proposed Site Plan**, which details the proposed development. The tree data has been overlaid onto the proposed designs to create the Arboricultural Implications Plan, which can be found at **Appendix 7**. This provides the basis for which this Arboricultural Impact Assessment has been prepared.

1.3 Scope of the Report

1.3.1 This report is compiled in accordance with *BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'* and is based on an objective assessment of the existing vegetation.

1.3.2 The specific design of the proposed development has been considered within the Arboricultural Implication Assessment in **Section 3** and is detailed on the Arboricultural Implications Plan at **Appendix 7**.

1.4 Survey Details

1.4.1 The original survey took place during the month of December 2019 and was conducted by Andrew Bussey.

2. Tree Descriptions and Recommendations

2.1 Full details of all individual trees surveyed are recorded in the tables at **Appendix 1**. A full explanation of the tables can be found at **Appendix 2**. Please refer also to the Tree Constraints Plan at **Appendix 6** for tree locations.

3. Arboricultural Implications Assessment (AIA)

3.1 Proposed Development

3.1.1 The proposal for the site involves the demolition of the existing buildings, and in their place a new two storey supported living residential development. The building will consist of 13 apartments, with a ground floor office space. Externally, individual residents' gardens, larger garden and allotment spaces and parking will be provided.

3.1.2 All tree works required to accommodate the proposals are detailed in *italics* in the recommendation columns of the tables at **Appendix 1.** Please note that any works recommended during the initial survey are also listed in these tables in non-italics.

3.2 Tree Removals for Development

3.2.1 In order to facilitate demolition and construction activities, it will be necessary to remove three trees within **G3**, one tree within **G6** and **T11**, each of which are considered to be low value trees.

3.2.2 The trees which require removal are retention category 'C' and can be removed without significantly affecting the visual amenity of the surrounding area.

3.3 Pruning for Development

3.3.1 No pruning works are required to accommodate the proposed layout.

3.4 Implications for Retained Trees

3.4.1 The Protective Barrier

3.4.1.1 In order to ensure the effective protection of retained trees during development, a protective barrier will be installed, in accordance with BS5837: 2012 and may comprise of protective fencing and/or ground protection. This will be the first job on site following the tree removal and pruning works. The fencing should ideally be positioned to protect the entire **Root Protection Area** (**RPA**) of the retained trees, in order to create a **Construction Exclusion Zone** (**CEZ**).

3.4.1.2 Routes for pedestrian and site traffic will be located outside, and diverted away from, the RPAs of the retained trees wherever possible. Where this is not practicable, temporary protective surfaces (ground protection) must be laid over the exposed RPAs which will distribute the weight of site vehicles, machinery or pedestrians whilst allowing moisture to reach the tree rooting area beneath. Such surfaces should be constructed in accordance with BS5837: 2012.

3.4.2 Access/Construction of Hard Surfacing

3.4.2.1 In this case, the proposed scheme does not require the construction of access roads, driveways or other hard surfaces within the RPA of retained trees. As such no specialised construction techniques/surface treatments will be required for this purpose.

3.4.3 Demolition

3.4.3.1 In order to meet the needs of this proposal, demolition of existing structures is required adjacent to retained trees. Due to this, specialist demolition methods will be required to prevent damage. This may include collapsing structures in a direction away from trees, utilising hand digging methods, working within RPAs etc. Full details on such methods should be included in an Arboricultural Method Statement, including where arboricultural supervision is necessary.

3.4.4 Construction/ Foundation Design.

3.4.4.1 Prior to construction, all protective measures required and listed in **Section 3.4.1** (protective measures) must be correctly installed to prevent unnecessary damage during development.

3.4.4.2 The footprint of the proposed structure does not incur the RPA of retained trees. As such no specialist construction or foundation methods are considered necessary for the sole purpose of preventing damage to trees.

3.4.4.3 Despite this, specialist foundation designs may still be required for other reasons, and advice should always be sought from a suitably qualified structural expert. The water demand of trees can be an important consideration when determining the appropriate foundation design. Because of this, water demands for the trees identified on this site are included at **Appendix 1**, in accordance with **NHBC Chapter 4.2**, for use by the appointed structural expert.

3.4.5 Utilities

3.4.5.1 In this case the routing of proposed utilities are situated outside the RPAs of retained trees. As such, no mitigation actions are considered necessary to mitigate potential damage to tree roots.

3.4.6 Site Compound

3.4.6.1 The site compound, which typically includes the site office, mess facilities, toilets, storage of materials and parking, must be located away from all of the trees and outside their RPAs. Care should also be taken to prevent soil contamination from chemical spillages, including petrol, diesel and oils.

3.4.7 Tree Shade

3.4.7.1 Due to the location of the trees, and their distance to the proposed building, issues related to shading are considered to be unlikely and do not require mitigation.

3.4.8 Landscaping

3.4.8.1 No ground level changes are to be undertaken within the RPA of retained trees, unless otherwise stated or agreed with the appointed Arboricultural consultant or the LPA. The requirement to raise/lower ground levels within RPAs should be communicated to these parties at the earliest practical convenience.

4. Conclusions

4.1 We are informed that there is no Tree Preservation Order (TPO) in force and that the site is not within a Conservation Area.

4.2 No tree works are required under the current context of the site.

4.3 The arboricultural implications of the development have been considered and are discussed in **Section 3**.

4.4 Three trees within **G3**, on tree within **G6** and **T11** require removal in order to facilitate proposed demolitions and construction activities. All tree works are included at **Appendix 1**. These are discussed in **Section 3.2** and their locations are shown on the Arboricultural Implications Plan at **Appendix 7.**

4.5 All development work carried out in close proximity to trees should be done so in a manner sympathetic to their needs. Otherwise the condition of the trees may deteriorate in the months and years following the development, leading to a loss of amenity and potentially hazardous trees.

4.6 The protection of retained trees can be achieved by the creation of a Construction Exclusion Zone based on the Root Protection Area of a tree. The Root Protection Area of each tree or group is marked on the Tree Constraints Plan at **Appendix 6**.

4.7 The proposed development should be accompanied by an Arboricultural Method Statement (AMS) detailing the specific protection measures necessary for each tree. This should specify the required fencing standard and positions (the creation of the Construction Exclusion Zone), acceptable construction techniques and necessary tree works.

4.8 Upon instruction JCA are able to provide a comprehensive Arboricultural Method Statement in order to ensure the continued health of trees throughout the proposed development. We are also able to provide tree planting schemes and organise tree works.

4.9 The data gained during the original 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, the 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 Common Name *Botanical Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
T 1	Semi-mature Sycamore *Acer pseudoplatanus*	12	4	4 NE	29#	2 1 6 4.5	Situated on adjacent land overhanging the road and the footpath. Single-stemmed and vertical with an unbalanced crown. Occasional pruning wounds. Not fully inspected due to limited access.	No action required. n/a	GOOD	GOOD	LOW	MOD	20+	C 1
T 2	Mature Sycamore *Acer pseudoplatanus*	16	6	5 N	62#	7# 6# 7# 6#	Situated on adjacent land. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects. Not fully inspected due to limited access.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
G 3	Young Mixed species *Details in observations*	To 8	0+	0+ n/a	To 12	See plan	Self-seeded Sycamore and English Elm of poor form which are growing through a fence line.	No action required. *Remove the three trees shown in red on the plan at* ***Appendix 7*** *in order to allow for demolition and construction activities.* n/a	GOOD	FAIR	LOW	MOD TO HIGH	10+	C 1
T 4	Early-mature Beech *Fagus sylvatica*	19	2	4.5 N	53	6.5 5.3 6.5 5	Situated on adjacent land. Single-stemmed with a slight lean and a reasonably balanced crown. Occasional pruning wounds. No major visible defects.	No action required. n/a	GOOD	GOOD	HIGH	MOD	40+	1 A 2
T 5	Mature Sycamore *Acer pseudoplatanus*	17	5	5 n/a	72#	2 5# 7# 5	Situated on adjacent land. Single-stemmed with a slight lean and a reasonably balanced crown. Occasional pruning wounds. Not fully inspected due to epicormic growth and Ivy to the stem.	No action required. n/a	GOOD	GOOD	HIGH	MOD	40+	1 A 2
G 6	Semi-mature Mixed species *Details in observations*	To 6.5	0+	0+ n/a	To 18	See plan	Low value self-seeded Elder, Goat Willow and Common Ash of poor form and little significance.	No action required. *Remove the one tree shown in red on the plan at* ***Appendix 7*** *in order to allow for demolition and construction activities.* n/a	GOOD	GOOD	LOW	LOW TO HIGH	10+	C 1
T 7	Mature Hornbeam *Carpinus betulus*	18	4	5 n/a	63	8.5 6.5 7.2 7#	Situated on adjacent land within Ings Grove Park. Twin-stemmed at 5.5m with a balanced crown and a slight lean to the north. Occasional pruning wounds. No major visible defects.	No action required. n/a	GOOD	GOOD	HIGH	LOW	40+	1 A 2
T 8	Early-mature Holly *Ilex aquifolium*	13	1.5	2 n/a	28	2.5 2.5 2.5 2.5	Situated on adjacent land within Ings Grove Park. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	LOW	40+	B 1
T 9	Mature Leylandii *X Cupressocyparis leylandii*	13	4	4 n/a	61#	3.5 3.5 3.5 3.5	Situated on adjacent land within Ings Grove Park. Single-stemmed and vertical with a balanced crown. Previously topped.	No action required. n/a	GOOD	FAIR	MOD	HIGH	20+	C 1
T 10	Mature Small-leaved Lime *Tilia cordata*	25	5.5	9 S	99	6.5 5.5 8# 7#	Situated on adjacent land within Ings Grove Park. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. Ivy prevented a detailed inspection.	No action required. n/a	GOOD	GOOD	HIGH	MOD	40+	1 A 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 N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
T 11	Semi-mature Hawthorn *Crataegus monogyna*	5	1.5	1.5 n/a	16	2 2 2 2	Situated on adjacent land within Ings Grove Park. Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects. Insignificant tree.	No action required. *Remove in order to allow for demolition and construction activities.* n/a	GOOD	GOOD	LOW	HIGH	20+	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; 0, 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 (marked green on the Tree Constraints Plan) = Trees of high quality.***

These trees 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 (marked in blue on the Tree Constraints Plan) = Trees of moderate quality.***

These trees 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 (marked in grey on the Tree Constraints Plan) = Trees of low quality.***

These trees 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 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 should be removed or treated in such a way as to make them safe 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: Glossary of Terms & Abbreviations

Arboriculture The cultivation of trees in order to produce individual specimens of the greatest ornament, for shelter or any primary purpose other than the production of timber or fruit.

Canker Disease damaged area of a tree, usually caused by fungus or bacteria affecting the bark.

Co-dominant stem A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree.

Crown lift The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.

Crown reduction The reduction of a tree's height and spread while preserving its natural shape.

Crown thin The removal of some of the density of a tree's crown**,** usually 5-15% allowing more light through its canopy and reducing wind resistance.

Deadwood Either dead branches, or a procedure involving the removal of dead, dying and diseased branches.

Dieback Where branches are beginning to show signs of death usually at the tips in the crown.

Epicormic shoots Small branches that grow in clusters around the base of the stem of a tree or within the crown. This is usually as a result of bad pruning or some other stress factor, although can be a natural growth pattern for some species of tree (eg Lime species).

Included bark Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength.

Pollarding A method of tree management in which the main trunk and principle branches of the tree are cut to the same height, and the resulting branches are then cropped on a regular basis.

Remedial pruning The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning.

RPA Root Protection Area – Theoretical rooting area of a tree as defined in BS5837:2012 *Trees in relation to construction.*

Appendix 5: 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.

Consulting Staff: Arboriculture

Toby Parsons *Cert. Arb. (RFS), Tech. Cert. (Arbor.A).* Toby joined JCA after spending 6 years working as a senior climber for various Arboricultural contractors in the East Midlands and the South-West. He has gained the Level 2 Certificate in Arboriculture (RFS) and an Arboricultural Technicians Certificate. Toby is LANTRA certified in Professional Tree Inspection.

Andrew Bussey. Andrew joined JCA having spent 12 years working as a tree surgeon for various private companies and a Local Authority. He has various NPTC qualifications, is QTRA qualified and is currently studying for his Arboricultural Technicians Certificate.

Phil Humeniuk *FdSc (Arboriculture).* Phil joined JCA having spent 3 years working for various tree surgery companies and as a Tree Officer for a Local Authority. He also has several years experience working as a consultant both for JCA and for another consultancy. Phil obtained his foundation degree in Arboriculture at the University of Central Lancashire and has various NPTC's and is LANTRA certified in Professional Tree Inspection.

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.

Charles Cocking *FdSc (Arboriculture), MArborA.* Charles joined JCA in January 2014 as an Apprentice 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 now part of our qualified Arboricultural consultancy team.

Paul Hodgson *Cert Arb (RFS), FdSc Arb, MArborA.* Paul joined JCA after spending 11 years working in the industry and for various organisations, which included practical tree work, surveying, lecturing at Myerscough College, Arb team leader at Royal Botanic Gardens, Kew, and a number of senior management positions. Paul is a professional member of the Arboricultural Association and a member of the Kew Guild.

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.

Consulting Staff: Ecology

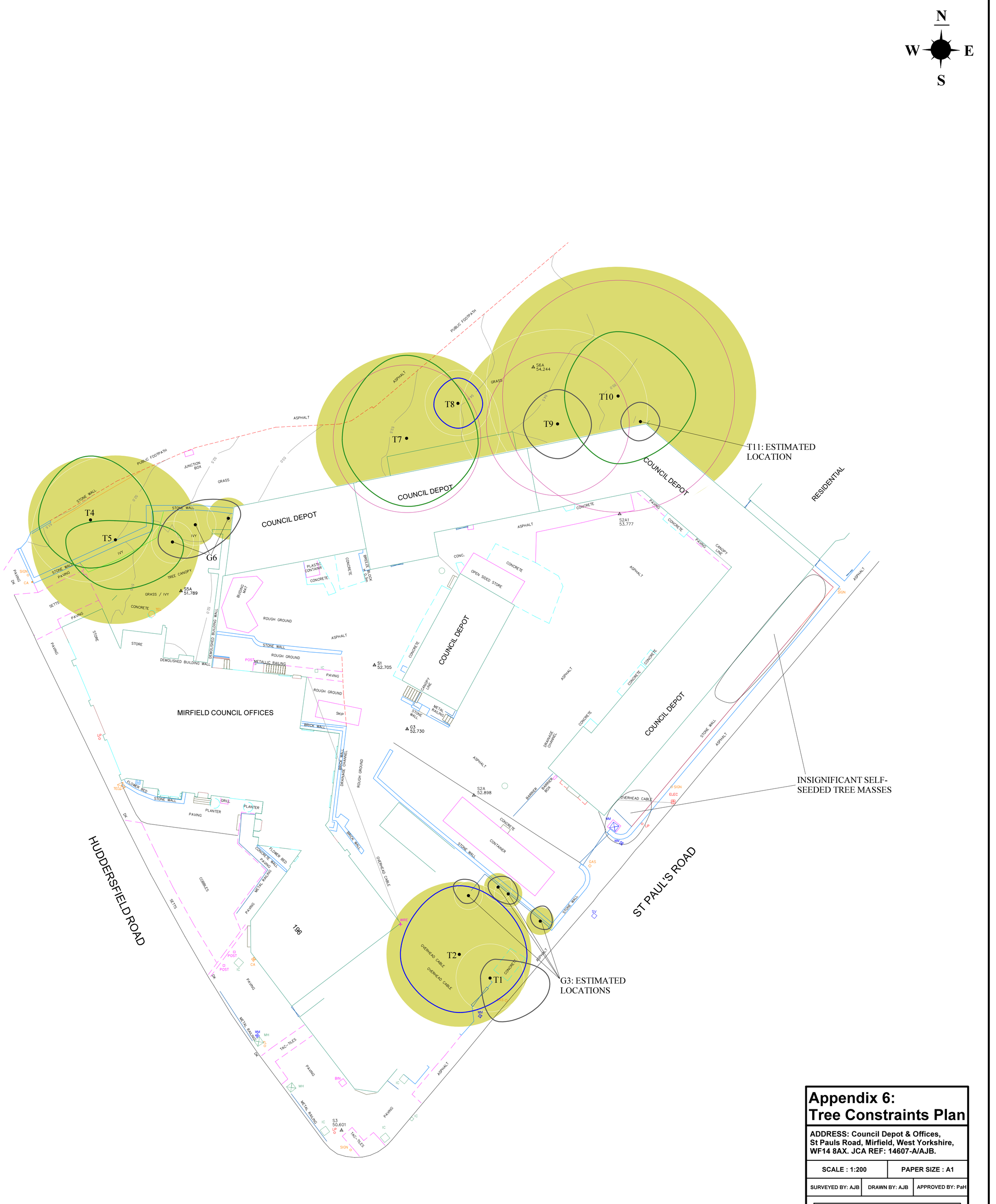
David Bodenham *BSc Ind (Hons) Zoology, MSc Biodiversity and Conservation.* David joined JCA as an addition to the expanding ecology department. An advocate of evidence based conservation, he studied Zoology (Ind) at University and moved onto an MSc in Biodiversity and Conservation where he gained the myriad of skills needed as an ecologist. With over 7 years of experience, David specialises in bat and amphibian ecology.

Amanda Beck *Cert He in Field Ecology.* Amanda joined JCA's ecology department in 2018, previously working as a freelance Ecological Consultant in North Wales and Liverpool and as a trainee Ecologist in South Wales. Amanda has extensive practical experience in surveying for botanical, amphibians, terrestrial and marine mammals along with invertebrate research work. She has practical experience in habitat management and creation and is a CIEEM student member.

Joe Earnshaw *BSc (Hons), MSc Biodiversity and Conservation, Student CIEEM Member*. Joe joined JCA's ecology department in 2018. He has a bachelor degree in Animal Management, from Askham Bryan College, York and has further obtained an MSc in Biodiversity and Conservation from the University of Leeds. Joe has expertise in aquatic invasive species identification/control and has practical experience in artificial badger sett and wetland creation. Joe is a member of the West Yorkshire Bat Group and volunteers with the Rivers Trust as part of their river monitoring project.

Administrative Staff

Sue Guest Administrative Team Leader.
Catherine Cocking Accounts Manager.
Kelly Saunders Accounts Assistant.
Simeon Haigh *BSc (Hons).* IT Director.
Lorraine Spink Administrative Assistant.
Lisa Hampson Marketing Manager.



Appendix 6: Tree Constraints Plan

ADDRESS: Council Depot & Offices, St Pauls Road, Mirfield, West Yorkshire, WF14 8AX. JCA REF: 14607-A/AJB.

SCALE : 1:200	PAPER SIZE : A1

SURVEYED BY: AJB	DRAWN BY: AJB	APPROVED BY: PaH

BRITISH STANDARD 5837:2012: 4.5
RETENTION CATEGORIES

Detailed definitions of these catagories 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 (RPA) INDICATES THE LIKELY ROOTING ZONE OF A TREE.

THIS 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: 14607-A/AJB)

JCA Limited
Arboricultural & Forestry Consultants

N

W E

S

T8

T10

T9

T7

T11: ESTIMATED LOCATION

T4

T5

G6

GARDENS

EXTERNAL CANOPY

INSIGNIFICANT SELF-SEEDED TREE MASSES TO BE REMOVED

BIN STORE

T2

T1

G3: ESTIMATED LOCATIONS

THIS PLAN IS TO BE PRINTED IN COLOUR AND READ IN CONJUNCTION WITH THE JCA ARBORICULTURAL REPORT (JCA REF: 14607-A/AJB)

0 1 2 3 4 5 10 15 20 metres

Appendix 7: Arboricultural Implications Plan

ADDRESS: Council Depot & Offices, St Pauls Road, Mirfield, West Yorkshire, WF14 8AX. JCA REF: 14607-A/AJB.

SCALE : 1:200	PAPER SIZE : A1

	TREE TO BE RETAINED
	TREE TO BE REMOVED
	STEM OF TREE TO BE RETAINED
	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA
	ROOT PROTECTION AREA ENCROACHED BY THE PROPOSED DEVELOPMENT
	PROPOSED DEVELOPMENT

JCA Limited

Arboricultural & Ecological Consultants

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 Bussey.

22nd November 2019

For and on behalf of ***JCA Ltd***

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- 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:

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