ARBORICULTURAL IMPACT ASSESSMENT
to BS 5837:2012
at
Land at Blackmoorfoot Road
Crosland Moor
Huddersfield
West Yorkshire
HD4 5NU

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1. Introduction

1.1 Purpose of the Report

1.1.1 This Arboricultural Impact Assessment has been prepared for the proposed development **Blackmoorfoot Road**, **Crosland Moor**, **Huddersfield**.

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

1.2 Terms of Reference

1.2.1 JCA Limited has been instructed by **KPP Architects Ltd** to prepare an Arboricultural Impact Assessment, based on our Arboricultural Report dated 22nd March 2024 (JCA Ref: **21765/AJB**). The arboricultural survey and report conform to the most recent specifications outlined in BS 5837: 2012 Trees in relation to design, demolition and construction - Recommendations.

1.2.2 We have been supplied with **Drawing Ref. 2007 Rev-N 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 6**. 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 6**.

1.4 Survey Details

1.4.1 The original tree survey took place during March 2024 and was conducted by **Andrew Bussey** *LANTRA Accredited PTI.*

2. Tree Descriptions and Recommendations

2.1 The tree information recorded during the original survey is detailed 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 5** for tree locations.

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3. Arboricultural Implications Assessment (AIA)

3.1 Proposed Development

3.1.1 The proposed development will consist of the construction of a number of light industrial units.

3.1.2 Any 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 required Arboricultural 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 the proposed development, it will be necessary to remove **T12, G19** (13 trees), **T20, T21, G22** (6 trees), **G23** (3 trees), **G24** (3 trees), **G25** (7 trees), **G27** (2 trees), 18 trees within **G28** (as shown in red on the plan at **Appendix 6**), **T32, T33, T34, T35, T36, G37** (3 trees) and 10 trees within **G43** (as shown in red on the plan at **Appendix 6**).

3.2.2 Of these, **T12, G19, G25, G28, T35, G37** and **G43** fall into retention category 'B' and **T21, G22, G23, G24, G27, T32, T33, T34** and **T36** fall into retention category 'C'.

3.2.3 The removal of trees for development can often be mitigated (either partially or entirely) by the planting of suitable specimens within a landscaping scheme. Whilst not always necessary, the planting of trees can improve the aesthetic value of the surrounding area and may be conditioned in the usual manner.

3.3 Pruning for Development

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

3.4 Temporary Protection Measures

3.4.1 **<u>The Protective Barrier</u>**

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 removals. 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**).

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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.

3.5 Implications for Retained Trees

3.5.1 Demolition

3.5.1.1 To the knowledge of JCA, no significant demolition activities are required adjacent to retained trees and as such, no mitigation measures are considered necessary.

3.5.2 Access/Construction of Hard Surfacing

3.5.2.1 We are informed that the existing hard standing which is located within the potential root protection areas of retained trees is to be retained and used as a sub-base for a new surface.

3.5.2.2 It should be noted limited rooting activity is likely to be present in those areas of the site where the hard standing has been removed during the past demolition phase. Specialist hard surfaces are not considered to be required in these areas.

3.5.3 Building Construction / Foundation Design

3.5.3.1 The footprints of the proposed buildings do 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.

3.5.3.2 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 Standards**, for use by the appointed structural expert.

3.5.4 Utilities

3.5.4.1 Details on service routes have not been provided to JCA at this time. Where utilities need to be brought onto the site, these should be routed away from the RPAs of retained trees. Where this is not possible, methodologies on the installation of underground services without damage to tree roots should be considered.

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3.5.4.2 All service providers should be consulted prior to commencement of works with the aim of minimising the number of service runs on the site. Any foreseeable incursions to RPAs should be communicated to the appointed arboricultural consultant and the LPA at the earliest possible time to prevent breach of planning conditions and damage to retained trees.

3.5.5 **Site Compound**

3.5.5.1 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.

3.5.6 **Landscaping**

3.5.6.1 Proposed fence lines may be constructed within the RPA of a tree if necessary, providing that appropriate considerations are taken with regards to the well-being of the effected tree. As such, no continual trenching is to be undertaken within the RPA (e.g. for small walls onto which panel fencing is installed). Excavations must be kept to a minimum and therefore only fence designs requiring intermittent posts will be acceptable within the RPA. Fences should also be kept as far away from the main stems of the trees as is reasonably possible.

3.5.6.2 No ground level changes are to be undertaken within the RPAs 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 must be communicated to these parties at the earliest practical convenience.

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4. Summary

4.1 It is assumed from the information available that **T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T14, T15, T16, G17, G19** (southern section), **G18, G24, G25, T26, G27** and **G28** within this report are subject to Woodland Tree Preservation Order (**TPO Ref: 04/21/w1**).

4.2 Some tree works were recommended during the original survey, irrespective of the development proposals. This is to manage potential risks or for general maintenance purposes. These are detailed in **non-italics** in the tables at **Appendix 1**.

4.3 The proposed development will consist of the construction of a number of light industrial units.

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

4.5 Some trees require removal in order to facilitate the proposed development. Tree works required to accommodate the proposals are detailed in ***italics*** in the tables at **Appendix 1**. Those trees requiring removal are shown in red on the Arboricultural Implications Plan at **Appendix 6**, where the proposals can also be viewed.

4.6 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.

4.7 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 5**.

4.8 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.

4.9 The data gained during the original survey provides an indication of the health of the tree/s. However, it does not enable a comprehensive assessment of its/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.

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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	Early-mature Sycamore *Acer pseudoplatanus*	13	2.5	2.5 n/a	36	2 4.5 4.5 5	Single-stemmed and vertical with an unbalanced crown. No evidence of significant pruning. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
T 2	Early-mature Sycamore *Acer pseudoplatanus*	13	4	4 n/a	30 x 2	1 5 6 2	Twin-stemmed at 0.5m with an unbalanced crown. This tree is 50% dead.	Remove Low	POOR	POOR	LOW	MOD	<10	U
T 3	Early-mature Sycamore *Acer pseudoplatanus*	14	3	3.5 n/a	44	4 3.5 6 2.5	Single-stemmed and vertical with a slightly unbalanced crown. No evidence of significant pruning. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
T 4	Early-mature Sycamore *Acer pseudoplatanus*	13	3.5	3.5 n/a	48, 45	6 6.5 6.5 4.5	Twin-stemmed at 0.5m with a balanced crown. Occasional pruning wounds, some with minor decay. A dirt pocket is present at the stem junction.	Monitor biennially. Low	GOOD	GOOD	MOD	MOD	40+	B 1
T 5	Early-mature Rowan *Sorbus aucuparia*	4.5	2	1.5 W	16	1.8 2.8 2.8 2	Single-stemmed and vertical with a slightly unbalanced crown and a poor form. Occasional pruning wounds.	No action required. n/a	GOOD	FAIR	LOW	MOD	20+	C 1
T 6	Early-mature Rowan *Sorbus aucuparia*	5	2	2 n/a	18	2.5 1 3 2	Single-stemmed and vertical with an unbalanced crown. Occasional pruning wounds. A decay cavity is present at 1.5m.	Monitor biennially. Low	GOOD	FAIR	LOW	MOD	10+	C 1
T 7	Early-mature Common Ash *Fraxinus excelsior*	12	2	2 N	26	4 4 5 2	Twin-stemmed at 2.5m with an unbalanced crown and a poor form. Decay to the stem.	Monitor biennially. Low	GOOD	FAIR	LOW	MOD	<10	C 1
T 8	Early-mature Silver Birch *Betula pendula*	10	1	2.5 n/a	29	2.5 1 3.5 3.5	Single-stemmed and vertical with an unbalanced crown. No evidence of significant pruning. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	LOW	40+	B 1
T 9	Early-mature Pine *Pinus sp.*	13	2	1.8 n/a	47	4 4 3.5 4	Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
T 10	Early-mature Rowan *Sorbus aucuparia*	5	1	1 n/a	10, 8	1 2.5 2 1	Twin-stemmed at ground level with an unbalanced crown. A dead and part collapsed tree.	Remove to ground level. Low	DEAD	DEAD	DEAD	N/A	Dead	U

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	Early-mature Hawthorn *Crataegus monogyna*	4	1	1.5 n/a	14	2 2.3 2.3 1.5	Twin-stemmed at 1.5m with a balanced crown. Occasional pruning wounds. No major visible defects.	No action required. n/a	GOOD	GOOD	LOW	HIGH	40+	C 1
T 12	Early-mature Sycamore *Acer pseudoplatanus*	12	4	3 n/a	38 x 3 Avg.	6 6 6 6	Multi-stemmed at ground level with a balanced crown. No evidence of significant pruning. Possible included bark present at the stem junction.	Monitor biennially. *Remove to facilitate the proposed development.* Low	GOOD	FAIR	MOD	MOD	20+	B 1
G 13	Early-mature Mixed species *Details in observations*	To 14	0+	0+ n/a	To 60#	See plan	Situated on adjacent land. Consisting of Goat Willow and Sycamore of a reasonable form.	No action required. n/a	GOOD	GOOD	LOW	MOD TO HIGH	40+	C 2
T 14	Early-mature Sycamore *Acer pseudoplatanus*	13	2	3 n/a	33 x 4 Avg.	6 5.5 6 5	Multi-stemmed at ground level with a balanced crown. No evidence of significant pruning. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
T 15	Early-mature Sycamore *Acer pseudoplatanus*	14	3	2.5 S	38 x 2	4.5 4.5 5 5#	Twin-stemmed at 1m with a balanced crown. Occasional pruning wounds, some leaving stubs. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
T 16	Early-mature Rowan *Sorbus aucuparia*	7	1	1 n/a	29	1.5 1.5 2 3	Multi-stemmed at 1.5m with an unbalanced crown. 50% dead.	Remove to ground level. Low	POOR	POOR	LOW	MOD	<10	U
G 17	Semi to early-mature Mixed species *Details in observations*	To 13	0+	0+ n/a	To 43	See plan	A linear group of Rowan, Whitebeam, Common Ash, Pine, Hawthorn, Sycamore and Downy Birch of a good form. Minor wounds noted. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	LOW TO HIGH	40+	1 B 2
G 18	Early-mature Sycamore *Acer pseudoplatanus*	To 13	0+	0+ n/a	To 28#	See plan	Trees of a good form. Not fully inspected due to dense vegetation.	No action required. n/a	GOOD	GOOD	MOD	LOW TO HIGH	40+	1 B 2
G 19	Semi to early-mature Mixed species *Details in observations*	To 13	0+	0+ n/a	To 60#	See plan	A group of Goat Willow, Rowan, Sycamore and Downy Birch of a good form. No major visible defects. The Cherry Laurel understory was not surveyed as it was not shown on the topographical plan provided.	No action required. *Remove the thirteen trees shown in red on the plan at* ***Appendix 6*** *to facilitate the proposed development.* n/a	GOOD	GOOD	MOD	LOW TO HIGH	40+	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 N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
T 20	Early-mature Leyland Cypress *X Cupressocyparis leylandii*	12	0	0.5 n/a	58	3.5 3.5 3.5 3.5	Multi-stemmed at 1.5m with a balanced crown. Occasional pruning wounds. Decay to the buttress and possible root severance near the base.	Monitor biennially. *Remove to facilitate the proposed development.* Low	GOOD	FAIR	LOW	HIGH	20+	C 1
T 21	Early-mature Leyland Cypress *X Cupressocyparis leylandii*	12	0.5	0.5 n/a	32	1 2.5 3 4	Twin-stemmed at 1.5m with an unbalanced crown. Root damage noted near the base.	Monitor biennially. *Remove to facilitate the proposed development.* Low	GOOD	FAIR	LOW	HIGH	20+	C 1
G 22	Early-mature Sycamore *Acer pseudoplatanus*	To 14	1+	1+ n/a	To 40	See plan	Three trees of a reasonable form. No major visible defects.	No action required. *Remove to facilitate the proposed development.* n/a	GOOD	GOOD	LOW	MOD	40+	C 2
G 23	Early-mature Goat Willow *Salix caprea*	To 12	1+	1+ n/a	To 42	See plan	Three trees of a reasonable form. Decay cavities noted.	Monitor biennially. *Remove to facilitate the proposed development.* Low	GOOD	FAIR	LOW	HIGH	20+	C 2
G 24	Early-mature Mixed species *Details in observations*	To 14	0+	0+ n/a	To 60	See plan	Goat Willow and Sycamore of a poor individual form.	No action required. *Remove to facilitate the proposed development.* n/a	GOOD	FAIR	LOW	MOD TO HIGH	20+	C 2
G 25	Early-mature Grey Poplar *Populus x canescens*	To 19	2+	2+ n/a	To 68#	See plan	Seven trees of a vertical and balance form. Root severance noted.	Monitor biennially. *Remove to facilitate the proposed development.* Low	GOOD	FAIR	MOD	HIGH	40+	1 B 2
T 26	Early-mature Wild Cherry *Prunus avium*	12	1	1 n/a	25, 20, 18	5 6 3.5 1	Multi-stemmed at ground level with an unbalanced crown. The co-dominant stem to the east has collapsed.	Remove to ground level. Low	FAIR	POOR	LOW	MOD	<10	U
G 27	Semi-mature Sycamore *Acer pseudoplatanus*	To 10	1+	1+ n/a	To 20	See plan	Two trees of a poor form.	No action required. *Remove to facilitate the proposed development.* n/a	GOOD	FAIR	LOW	MOD	20+	C 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
G 28	Early-mature Mixed species *Details in observations*	To 14	0+	0+ n/a	To 68#	See plan	A group comprised mainly of Goat Willow with Sycamore, Common Ash and Rowan also noted. Bark wound noted. Earthworks resulting in root severance throughout the group.	Monitor biennially. *Remove the eighteen trees shown in red on the plan at **Appendix 6** to facilitate the proposed development.* Low	GOOD	GOOD	MOD	MOD TO HIGH	40+	B 1 2
G 29	Early-mature Goat Willow *Salix caprea*	To 12	0+	0+ n/a	To 70	See plan	Three trees of a poor form. Bark wounds due to mechanical damage noted.	Monitor biennially. Low	GOOD	POOR	LOW	HIGH	20+	C 2
G 30	Semi-mature Pine *Pinus sp.*	To 11	1+	1+ n/a	To 12	See plan	Two trees of a reasonable form. No major visible defects.	No action required. n/a	GOOD	GOOD	LOW	MOD	20+	C 2
T 31	Early-mature Norway Maple *Acer platanoides*	13	3	3.5 n/a	46	5 4.5 5 4	Twin-stemmed at 4m with a balanced crown. Occasional pruning wounds. A bark tear is present on the stem.	Monitor biennially. Low	GOOD	GOOD	MOD	MOD	40+	B 1
T 32	Early-mature Rowan *Sorbus aucuparia*	8	2	1.5 NW	27	3 1 3.5 3	Single-stemmed and leaning with an unbalanced crown and a poor form. Basal scar noted.	Monitor biennially. *Remove to facilitate the proposed development.* Low	GOOD	FAIR	LOW	MOD	10+	C 1
T 33	Early-mature Common Ash *Fraxinus excelsior*	12	5	5 n/a	31	4 2 4.5 3	Single-stemmed and leaning with an unbalanced crown and a poor form. Ash Dieback noted.	Monitor biennially. *Remove to facilitate the proposed development.* Low	FAIR	FAIR	LOW	MOD	10+	C 1
T 34	Early-mature Common Ash *Fraxinus excelsior*	11	2	3 n/a	44	4 4 4 4	Single-stemmed and vertical with a balanced crown. Ash Dieback noted.	Monitor biennially. *Remove to facilitate the proposed development.* Low	FAIR	FAIR	LOW	MOD	10+	C 1
T 35	Early-mature Silver Birch *Betula pendula*	16	2	4 n/a	48	6 6 6 6	Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects.	No action required. *Remove to facilitate the proposed development.* n/a	GOOD	GOOD	MOD	LOW	40+	B 1
T 36	Early-mature Common Ash *Fraxinus excelsior*	10	2	2 n/a	41	5 5.5 7 5	Twin-stemmed at 2.5m with a balanced crown. Ash Dieback noted.	Monitor biennially. *Remove to facilitate the proposed development.* Low	FAIR	FAIR	LOW	MOD	10+	C 1

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
G 37	Early-mature Rowan *Sorbus aucuparia*	To 11	3+	3+ n/a	To 26	See plan	Three trees of a good form. No major visible defects.	No action required. *Remove to facilitate the proposed development.* n/a	GOOD	GOOD	MOD	MOD	40+	B 2
T 38	Early-mature Sycamore *Acer pseudoplatanus*	12	1	1 n/a	18 x 5	3 3 3 3	Multi-stemmed at ground level with a balanced crown. Not fully inspected due to vegetation.	No action required. n/a	GOOD	GOOD	LOW	MOD	20+	C 1
T 39	Early-mature Common Ash *Fraxinus excelsior*	9	3	4 n/a	20	3 3 3 3	Single-stemmed and vertical with a balanced crown. Ash Dieback noted.	Monitor biennially. Low	FAIR	FAIR	LOW	MOD	10+	C 1
T 40	Semi-mature Common Ash *Fraxinus excelsior*	7	3	3 n/a	14	2 2 2 2	Single-stemmed and vertical with a balanced crown. Ash Dieback noted.	Monitor biennially. Low	FAIR	FAIR	LOW	MOD	10+	C 1
G 41	Early-mature Whitebeam *Sorbus aria*	To 10	2+	2+ n/a	To 40	See plan	Three trees of a good form. Not fully inspected due to Ivy and vegetation.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 2
T 42	Early-mature Norway Maple *Acer platanoides*	11	2	2 n/a	35#	5# 5# 5# 5#	Single-stemmed and vertical with a balanced crown. Not fully inspected due to vegetation.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
G 43	Early-mature Mixed species *Details in observations*	To 15	0+	0+ n/a	To 65	See plan	A group of Pine, Goat Willow, Downy Birch, Sycamore, Larch and Norway Maple of good form. Earthworks resulting in root severance noted throughout the group.	Monitor biennially. *Remove the ten trees shown in red on the plan at* ***Appendix 6*** *to facilitate the proposed development.* Low	GOOD	GOOD	MOD	LOW TO HIGH	40+	B 1 2

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 is listed in accordance with current NHBC Standards. 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.

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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.

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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.

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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.

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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), BTEC National Diploma(Arboriculture), National Certificate In Horticulture, City & Guilds In Horticulture.* Dan joined JCA in February 2019 with nearly 30 years' experience in arboriculture with extensive Botanical and Mycological expertise. 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), TechArborA.* 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.

Administrative Staff

Catherine Cocking Accounts Manager.
Kelly Saunders Accounts Assistant.
Lorraine Spink Administrative Assistant.
Adie Gray I.T. Officer.

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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.

TREE ROOT PROTECTION AREAS HAVE NOT BEEN OFF-SET DUE TO MULTIPLE SITE CONSTRAINTS WHICH INCLUDE GROUND LEVEL CHANGES, CONCRETE PLATFORMS AND RETAINING WALLS

THIS PLAN IS TO BE PRINTED IN COLOUR AND READ IN CONJUNCTION WITH THE JCA ARBORICULTURAL REPORT (JCA REF: 21765-A/AJB)

Appendix 5: Tree Constraints Plan

ADDRESS: Land at Blackmoorfoot Road, Crosland Moor, Huddersfield, West Yorkshire, HD4 5NU.
JCA REF: 21765-A/AJB

SCALE : 1:500	PAPER SIZE : A1

SURVEYED BY: AJB	DRAWN BY: AJB	APPROVED BY: ME

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

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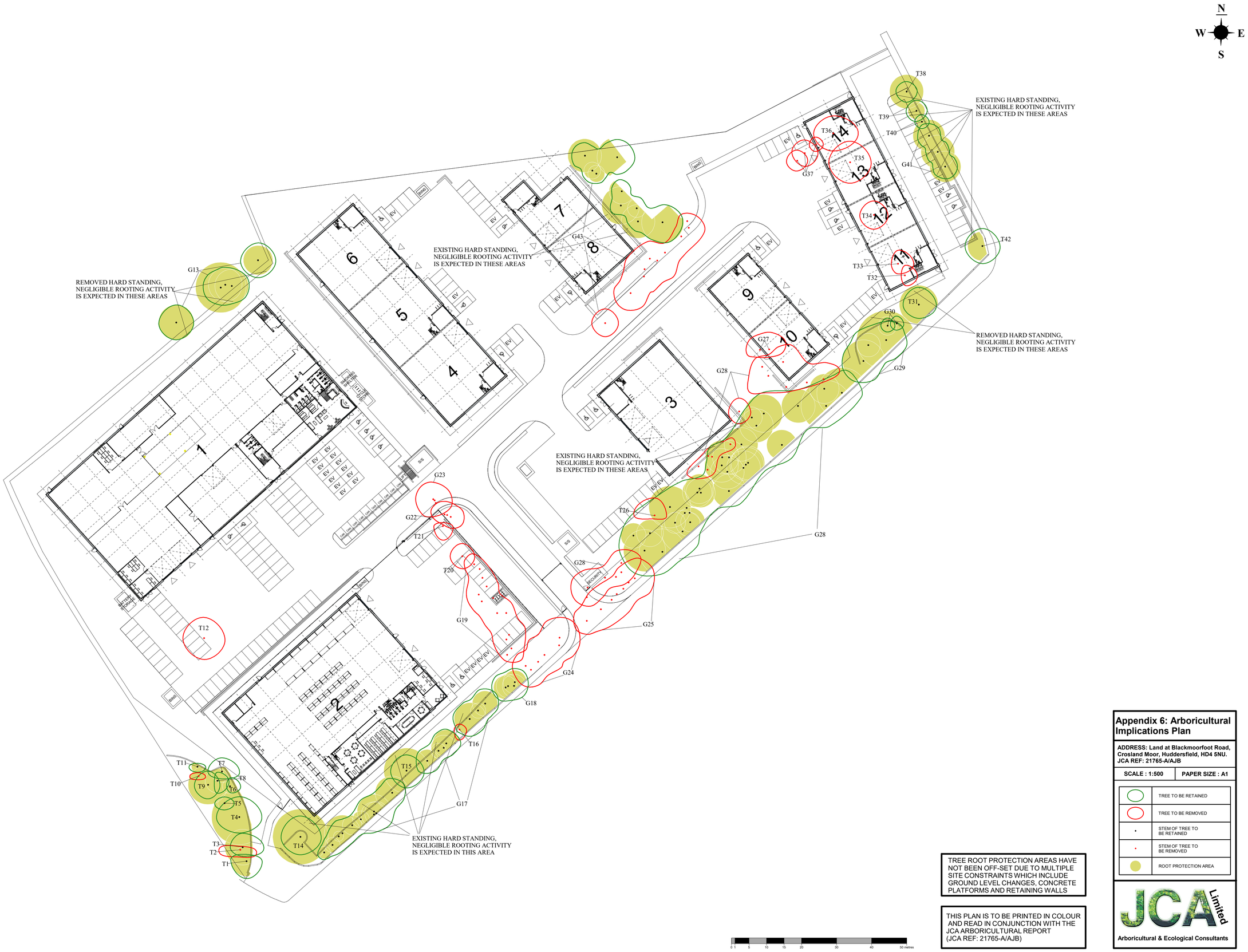

TREE ROOT PROTECTION AREAS HAVE NOT BEEN OFF-SET DUE TO MULTIPLE SITE CONSTRAINTS WHICH INCLUDE GROUND LEVEL CHANGES, CONCRETE PLATFORMS AND RETAINING WALLS

THIS PLAN IS TO BE PRINTED IN COLOUR AND READ IN CONJUNCTION WITH THE JCA ARBORICULTURAL REPORT (JCA REF: 21765-A/AJB)

Appendix 6: Arboricultural Implications Plan

ADDRESS: Land at Blackmoorfoot Road, Crosland Moor, Huddersfield, HD4 5NU.
JCA REF: 21765-A/AJB

SCALE : 1:500	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

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

Redacted

.....

Andrew Bussey *LANTRA Accredited PTI.*

22nd August 2024

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

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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:

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