

**ARBORICULTURAL METHOD STATEMENT
to BS 5837:2012
at
Land off Ashbrow Road
Huddersfield
West Yorkshire
HD2 1DX**

Client:
Northlight Architecture Ltd

Client Address:
The Media Centre
7 Northumberland Street
Huddersfield
West Yorkshire
HD1 1RL

JCA Ref:
17829-C/AJB

Contents

1. Introduction	3
2. Tree Works Prior, During and Post Construction	4
3. The Protective Barrier Prior, During and Post Construction.....	5
4. Construction Phase	7
4.1 Demolition Works.....	7
4.2 Ground Level Changes.....	7
4.3 Construction of Hard Surfaces	7
4.4 Construction of New Buildings	8
4.5 Excavations and Services	8
4.6 Location of the Site Compound	8
5. Post Construction Phase	9
5.1 Post Construction Landscaping.....	9
6. Timescale of Works.....	10
7. Relevant Contact Details	10
 Appendix 1: Tree Works Schedule	 12
Appendix 2: Protective Barrier.....	13
Appendix 3: Utilities and Drainage.....	15
Appendix 4: Permanent Hard Surfaces.....	17
Appendix 5: Tree Protection Plan.....	18

1. Introduction

1.1 Purpose of the Method Statement

- 1.1.1 This Arboricultural Method Statement has been prepared to ensure good practice in the protection of retained trees during the development at **Land off Ashbrow Road, Huddersfield, HD2 1DX**.

1.2 Terms of Reference

- 1.2.1 JCA Limited is instructed by **Northlight Architecture Ltd** to prepare an Arboricultural Method Statement for the proposed development, based on our arboricultural report dated 26th November 2021 (JCA Ref: **17829-A/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 The proposed development will consist of the construction of a Retreat administration building and five dwellings with associated access driveways, car parking spaces and other ancillary features which include bin stores and areas of hard and soft landscaping.
- 1.2.3 The following drawings have been provided and these are the basis of the Arboricultural Method Statement and the Tree Protection Plan at **Appendix 5**:
- Topographical Survey (Drawing Ref. **PDAP Ashbrow - EX01 - Existing Site Plan**).
 - Development Layout (Drawing Ref. **PDAP Ashbrow - AL01 - Proposed Site Plan D**).

1.3 Status of the Method Statement

- 1.3.1 This Arboricultural Method Statement should be included as part of the specification and schedule of works issued to the building contractor and can form part of the contract.
- 1.3.2 This Arboricultural Method Statement should be available on site for inspection by the local authority, contractors and other relevant persons.

2. Tree Works Prior, During and Post Construction

2.1 Tree Works Prior to Construction

- 2.1.1 Prior to any construction activity, the first operation on site will be the undertaking of the necessary arboricultural works, as described at **Appendix 1**.
- 2.1.2 The tree works include:
- The removal of **T2, T9, T18, T20, T22, G23, T24, T26**, two trees within **G27** and **T28**, to facilitate the proposed development.
 - The pruning of **T7** and **T10**, for arboricultural reasons.
 - The pruning of **T30**, to facilitate the development.

2.2 Tree Works During or Post-Construction

- 2.2.1 In this case, no tree works are envisaged to be required during or after the construction phase.
- 2.2.2 Damage to trees during the construction phase should be entirely prevented by the installation of the temporary protective barrier (fencing and ground protection), to create a Construction Exclusion Zone (CEZ). All persons on site must be aware of limitations that apply within the CEZ (please refer to **Section 3.1.3**).
- 2.2.3 If any trees on site are damaged, this must be immediately reported to JCA to agree on appropriate remedial action. Contact numbers for all parties can be found at **Section 7**.

2.3 Recommendations For Tree Works

- 2.3.1 All work must be undertaken to BS 3998: 2010 - *Recommendations for tree work* and carried out by qualified, experienced and, ideally, Arboricultural Association approved contractors who must be adequately insured.
- 2.3.2 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the attention of JCA immediately.
- 2.3.3 No liability can be accepted by JCA in respect of the trees unless the recommendations of this Method Statement are carried out under our supervision.

3. The Protective Barrier Prior, During and Post Construction

3.1 Protective Barrier Prior to Construction

- 3.1.1 The installation of the temporary protective barrier will be the very first job to be undertaken on site following the completion of the tree works (**Section 2.1**) and the removal of the light features (**Section 4.1**). This barrier will comprise of protective fencing and ground protection, as detailed below and in **Section 3.2**.
- 3.1.2 The protective fencing must be constructed in accordance with BS 5837: 2012 *Trees in relation to design, demolition and construction - Recommendations* and will be located as shown on the Tree Protection Plan at **Appendix 5**. Where possible, the protective barrier will enclose the entire Root Protection Area (RPA) of the trees to make a Construction Exclusion Zone (CEZ); **this area is to be considered a restricted area; no pedestrians, vehicles, equipment or machinery are allowed within the CEZ and the storage of materials is not permitted, unless specified within this Method Statement.**
- 3.1.3 The protective fencing will be installed in accordance with BS 5837: 2012 and will comprise of a vertical and horizontal scaffold framework, well braced to resist impacts. The vertical tubes should be spaced at a maximum interval of 3m and driven securely into the ground, taking care to avoid underground services and structural roots. Finally, weld mesh panels are to be securely fixed on the scaffold framework. Please refer to **Appendix 2** for protective fencing details.
- 3.1.4 Once the fencing is installed, waterproof signs with the sentence ‘*Protected tree zone, no storage or operations within this area*’ are to be placed at 3m intervals to ensure that all personnel are aware of the restrictions that apply to the cordoned off area. A prepared sign is available at **Appendix 2**.

3.2 Ground Protection

- 3.2.1 Where it is not possible to enclose the entire RPA of **T8**, **T9** and **T30** with protective fencing (as indicated in green shade on the plan at **Appendix 5**), it will be necessary to lay appropriate ground protection which, in combination with the fencing described in **Section 3.1**, will comprise the protective barrier.
- 3.2.2 The ground protection will be installed prior to construction and retained until the material completion of development. The purpose of the ground protection is to enable site traffic to pass over the RPAs of trees, whilst minimizing compaction and disturbance of the underlying soil which can lead to root asphyxiation and damage.

- 3.2.3 As only pedestrian traffic and light machinery is required to pass over the RPA (no more than 2 tonnes in weight), a porous, thin geotextile membrane will be laid over the exposed area. A layer of sharp sand or woodchip, no less than 150mm in depth will be evenly spread over the geotextile and **must not** be compacted by mechanical means. Scaffold boards will then be placed on top of this. This construction detail will provide adequate ground protection for pedestrian traffic and the use of light machinery.

3.3 Checking the Protective Barrier Prior to Construction

- 3.3.1 Once installed, the appointed arboriculturalist will be invited on site to inspect the protective fencing and ground protection, ensuring that it is located in the correct position and that it has been constructed in accordance with this Method Statement. No other work, including soil stripping, excavation, or the bringing onto site of materials or machinery, shall commence until the barrier is installed and confirmed to be acceptable by the appointed arboriculturalist.
- 3.3.2 It is important that the protective fencing and ground protection be checked by the arboricultural consultant prior to any construction works being carried out on site. **If at any time during construction the protective fencing or ground protection is not correctly installed, or if it does not comply with BS 5837: 2012, this could result in damage being caused to trees and consequently, a stop notice may be served by the LPA.**

3.4 Protective Barrier During Construction

- 3.4.1 No operations shall take place which require the removal of part of the protective barrier without prior agreement with the Local Planning Authority.
- 3.4.2 The protective barrier must be inspected for faults or damage by the site manager or other responsible named person on a regular basis and a written record kept. Any faults or defects must be repaired or replaced as soon as is reasonably practicable. Details of the site manager and relevant contact details can be found at **Section 7**.

3.5 Removal of the Protective Barrier

- 3.5.1 When the development phase is complete and the main site machinery has been removed, the protective barrier may be dismantled and removed from site.
- 3.5.2 It should be noted the same restrictions apply to all RPAs as the CEZ (please refer to **Section 3.1.2**).

4. Construction Phase

4.1 Demolition Works

- 4.1.1 The removal of light features in the form of a small wall and cold frame are required within the rooting zone of **G25**, as annotated on the plan at **Appendix 5**. These operations will be undertaken prior to the erection of the protective fencing and undertaken manually, no vehicular movement or plant is permitted within tree rooting zones.
- 4.1.2 The existing garage is proposed to be demolished under arboricultural supervision adjacent to **G29** in the location shown in a hatched brown line on the plan at **Appendix 5**, a sensitive method will be employed. In order to prevent damage to nearby trees, the buildings will be collapsed onto their existing footprint in a direction away from the trees; a method referred to as '*top down, pull back*'.

4.2 Ground Level Changes

- 4.2.1 Other than the no-dig car parking spaces, no further ground level changes are permitted within the RPA of any tree to be retained on this

4.3 Construction of Hard Surfaces

- 4.3.1 Hard surfaces, in the form of an access driveways and an extended car parking area, are proposed within the RPA of **T1**, **T3** and **G25**. A no-dig/porous method of construction will therefore be implemented to prevent damage to tree roots.
- 4.3.2 First, any minor undulations in ground levels (e.g. pot holes) will be filled-in using suitable top soil or sharp sand, to create a level surface. No excavation will be utilised to achieve a level surface.
- 4.3.3 Following this, a thin geotextile membrane will be placed on the soil and pegged/pinned into position. A three-dimensional, cellular confinement system will be installed over the geotextile membrane and filled with no-fines, washed angular stone, no less than 4mm in diameter and to a minimum depth of 100mm. This may then be compacted using a plate compactor (wacker-plate) and utilised as ground protection for the retained trees.
- 4.3.4 To retain the surfacing in place, edging supports may be required. Such supporting systems will minimize disturbance to the underlying soil and will not utilise continual trenching within the RPA. Acceptable methods include peg and board edging, gabions or sleepers which may be pinned in place if required.

- 4.3.5 The final surface treatment must be porous to enable the percolation of water through the surfacing to the tree roots beneath. This method is considered to be appropriate in terms of minimising damage to retained trees. However, a structural engineer should be consulted to ensure that the mechanical needs of the chosen design are adequately met.

4.4 Construction of New Buildings

- 4.4.1 In this case, the proposed buildings are located at a sufficient distance from retained trees that no specialist foundation methods are required for arboricultural purposes.

4.5 Excavations and Services

- 4.5.1 Precise details on service routes are not available at this time. As such, no provision for the routing of utilities within the RPAs is made within the scope of this report.
- 4.5.2 All utilities should ideally be located outside the RPA of retained trees; this should be achievable as the trees to be retained are located around the site periphery.
- 4.5.3 If, for whatever reason, incursions into the RPAs are considered unavoidable, the consulting arboriculturalist and/or the LPA must be consulted immediately, to prevent a breach of planning conditions and/or damage to retained trees.
- 4.5.4 Guidance and methodologies on the installation of underground services whilst minimising damage to tree roots is provided at **Appendix 3**.

4.6 Location of the Site Compound

- 4.6.1 The site compound, typically including the site office, mess facilities, toilets, storage of materials and parking, must be located away from, and outside the RPA of retained trees.
- 4.6.2 Those areas designated for the storage and/or mixing of chemicals, including petrol, diesel and oils must also be located away from, and outside the RPA of retained trees. Such areas should be constructed with consideration to, and contingencies for, the occurrence of spillages, preventing the leaching of chemicals into unprotected, open ground.

5. Post Construction Phase

5.1 Post Construction Landscaping

- 5.1.1 Following completion of the main construction phase, the protective fencing and ground protection may be removed, and the landscaping phase can commence.
- 5.1.2 The proposals include for the installation of wooden boundary fences and gate posts. Where these are located within the RPA of retained trees, post holes will be dug by hand and they are to be as small as practically possible. They may be driven in either by hand or using mechanical means. However, if construction plant is to be used, it must work from outside of the RPA at all times.
- 5.1.3 The retained trees on site may be subject to some form of landscaping or seeding beneath their canopies after the development phase. At this stage the protective barrier will have been removed and the property may be occupied.
- 5.1.4 Landscaping works must be carried out in such a way as to avoid ground level changes or deep digging within RPAs. Tractor mounted rotovation or other mechanised cultivation methods must not be used within the RPAs of retained trees.
- 5.1.5 Heavy machinery is not permitted in the vicinity of retained trees, unless otherwise stated in this method statement.
- 5.1.6 Herbicides should be appropriate for the purpose and should not be used in such a way as to damage any retained trees or vegetation.

6. Timescale of Works

6.1.1 The timescale for arboricultural requirements are summarised below:

Timescale	Action	✓	Initial
Stage 1	All requirements listed in the planning consent are approved by the Local Authority planning office.		
Stage 2	Undertake the tree works (as detailed at Appendix 1).		
Stage 3	Remove the light features within the RPA of G25 manually and in line with Section 4.1 .		
Stage 4	Install the temporary protective fencing around the trees (as detailed at Appendix 2 and as shown on the Tree Protection Plan at Appendix 5).		
Stage 5	Install ground protection within the RPAs of those trees which are not fully protected by the fencing (as detailed in Section 4 and shown in green on the plan at Appendix 5).		
Stage 6	Have the Arboricultural Consultant inspect the fencing and ground protection measures prior to any on site construction. Once inspected, the protective fencing and ground protection must not to be moved or breached.		
Stage 7	Undertake the demolition of the existing garage/removal of existing hard surfaces (as detailed in Section 4).		
Stage 8	Construction Phase: Install permanent hard surfaces whilst undertaking suitable measures to avoid root damage and soil compaction (as detailed in Section 4 and at Appendix 4).		
Stage 9	Following the completion of the construction phase and when all site traffic and machinery has left, the protective fencing and ground protection can be removed.		
Stage 10	Undertake the landscaping scheme in line with Section 5 .		

7. Relevant Contact Details

Contact Name	Organisation/Detail	Contact Number
Andrew Bussey Arboricultural Consultant	JCA Limited	01422 376335
Nick Goddard Tree Officer	Kirklees Metropolitan Council	01484 414909
TBC Site Manager	TBC	TBC

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 Common Lime <i>Tilia x europaea</i>	17	4	1 W	38 x 2 Avg.	6.5 3.5 5 3	Overhanging the footpath and the road. Twin-stemmed at the base with an unbalanced crown. Included bark present at the stem junction.	Monitor biennially. Low	GOOD	FAIR	MOD	MOD	20+	B 1
T 2	Early-mature Cypress <i>Cupressus sp.</i>	6	1	1 n/a	16	1.5 1 1.5 1	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects.	Remove to facilitate the proposed development. n/a	GOOD	GOOD	LOW	HIGH	20+	C 1
T 3	Early-mature Norway Maple <i>Acer platanoides</i>	15	2	5 E	54	5 1 7.5# 5	Single-stemmed and leaning with an unbalanced crown and a kinked stem. Not fully inspected due to vegetation.	Monitor biennially. Low	GOOD	FAIR	MOD	MOD	20+	B 1
T 4	Early-mature Sycamore <i>Acer pseudoplatanus</i>	12	3	3 n/a	42#	2 5 3 3	Twin-stemmed at 6m with a balanced crown. Multiple cankers throughout. Not fully inspected due to Ivy.	Monitor biennially. Low	FAIR	GOOD	LOW	MOD	10+	C 2
T 5	Early-mature Elm <i>Ulmus sp.</i>	13	1	2.5 n/a	36	2 4.5 4.5 4	Twin-stemmed at 5m with a balanced crown. No evidence of significant pruning. No major visible defects.	No action required. n/a	GOOD	GOOD	LOW	HIGH	20+	C 2
T 6	Early-mature Hawthorn <i>Crataegus monogyna</i>	6	1	1 n/a	15, 7	1 2 1.5 3	Twin-stemmed at 0.5m with a balanced crown. No evidence of significant pruning. No major visible defects.	No action required. n/a	GOOD	GOOD	LOW	HIGH	20+	C 2
T 7	Early-mature Sycamore <i>Acer pseudoplatanus</i>	15	3	3 n/a	41, 17	5 5.3 6 5	Growing against the adjacent building and likely causing nuisance issues. Twin-stemmed at ground level with a balanced crown. No evidence of significant pruning. No major visible defects.	Prune back to clear the building by 2m. Low	GOOD	GOOD	MOD	MOD	20+	B 1
T 8	Early-mature Sycamore <i>Acer pseudoplatanus</i>	16	6	6 n/a	45	3 4.5 3 4.5	Twin-stemmed at 8m with a balanced crown. The co-dominant stems are crossing above the stem junction.	Monitor biennially. Low	GOOD	FAIR	MOD	MOD	10+	C 1
T 9	Early-mature Common Ash <i>Fraxinus excelsior</i>	17	2	5 n/a	60	7.5 4.5 7.5 7	Twin-stemmed at 1.5m with a balanced crown. No evidence of significant pruning. No major visible defects. Girdled root noted.	Remove to facilitate the proposed development. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
T 10	Early-mature Sycamore <i>Acer pseudoplatanus</i>	14	3	3 n/a	40#	4 4# 5 3.5	Growing against the adjacent building and likely causing nuisance issues. Twin-stemmed at 3m with a balanced crown. Not fully inspected due to Ivy.	Prune back to clear the building by 2m. Low	GOOD	GOOD	MOD	MOD	20+	B 1

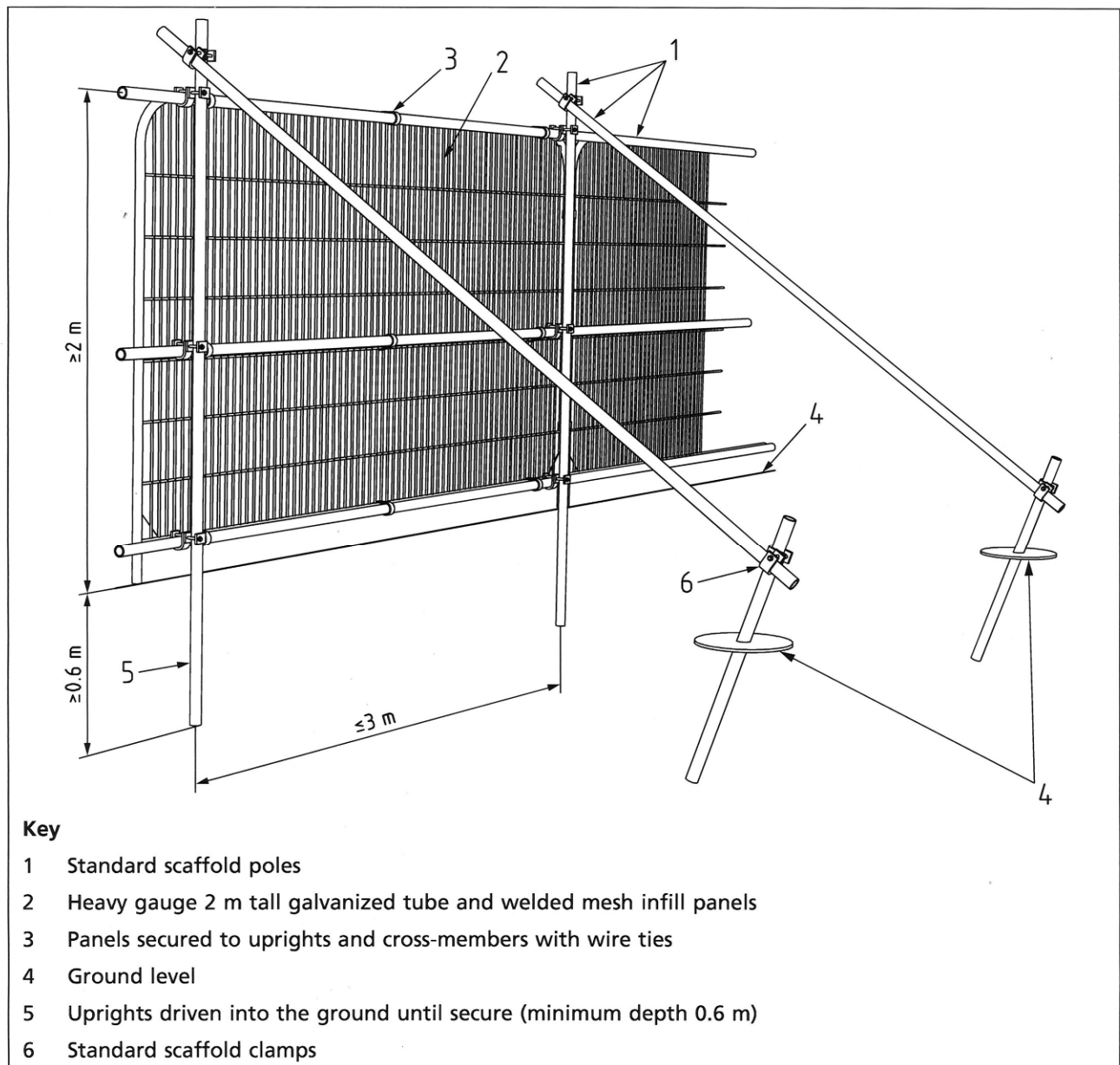
Tree Ref.	Age Common Name Botanical Name	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
G 11	Young to semi-mature Mixed species <i>Details in observations</i>	To 11	0+	0+ n/a	To 18	See plan	Four small trees (Common Ash, Elm, Cherry and Hawthorn) of a reasonable form. No major visible defects.	No action required. n/a	GOOD	GOOD	LOW	MOD TO HIGH	20+	C 2
T 12	Early-mature Common Lime <i>Tilia x europaea</i>	11	3	7 N	30#	4 3# 3 0	Single-stemmed and leaning with an unbalanced crown and a poor form.. Not fully inspected due to Ivy.	No action required. n/a	GOOD	GOOD	LOW	MOD	10+	C 1
T 13	Semi-mature Common Ash <i>Fraxinus excelsior</i>	13	6	6 n/a	16	3 2 1 1	Single-stemmed and leaning with an unbalanced crown and a poor form.	No action required. n/a	GOOD	FAIR	LOW	MOD	10+	C 1
G 14	Early-mature to mature Mixed species <i>Details in observations</i>	To 18	0+	0+ n/a	To 68#	See plan	A linear boundary group of Common Ash, Common Lime, Norway Maple, Sycamore, Cypress and Beech of a good form. Minor deadwood noted as well as decay cavities.	No action required. n/a	GOOD	GOOD	HIGH	MOD TO HIGH	40+	1 A 2
T 15	Early-mature Hawthorn <i>Crataegus monogyna</i>	7	1	1 n/a	15	2 1 2 1	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects. Not shown on the topographical plan provided	No action required. n/a	GOOD	GOOD	LOW	HIGH	20+	C 1
T 16	Early-mature Cypress <i>Cupressus sp.</i>	13	3	3 n/a	58	3 3 3 3	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects.	No action required. n/a	GOOD	GOOD	MOD	HIGH	20+	B 1
T 17	Early-mature Horse Chestnut <i>Aesculus hippocastanum</i>	12	2	4 n/a	35	2 4 4 4	Multi-stemmed at 3m with a balanced crown and a poor form.	No action required. n/a	GOOD	FAIR	LOW	MOD	20+	C 1
T 18	Early-mature Common Lime <i>Tilia x europaea</i>	18	2	5 n/a	47	5.5 5 5 3.5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects. Minor deadwood noted.	Remove to facilitate the proposed development. n/a	GOOD	GOOD	MOD	MOD	40+	B 1
T 19	Early-mature Sycamore <i>Acer pseudoplatanus</i>	17	2	2 n/a	48, 38	6.5 4 5 6.5	Twin-stemmed at ground level with a balanced crown. Included bark present at the stem junction.	Monitor biennially. Low	GOOD	FAIR	MOD	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
T 20	Early-mature Common Lime <i>Tilia x europaea</i>	20	8	8 n/a	46#	6 4 4 4	Single-stemmed and vertical with a balanced crown yet a spindly form. Not fully inspected due to vegetation. Significant deadwood and crown dieback was noted to the canopy in the most recent site visit in May 2022.	Remove as not considered to be worthy of post-development retention. n/a	POOR	FAIR	LOW	MOD	<10	C 1
G 21	Early-mature to mature Mixed species <i>Details in observations</i>	To 18	2	2 n/a	To 70#	See plan	A linear group of Sycamore, Beech and Common Lime of good form. Not fully inspected due to vegetation and Ivy.	No action required. n/a	GOOD	GOOD	HIGH	MOD	40+	1 A 2
T 22	Early-mature Cypress <i>Cupressus sp.</i>	7	0	0 n/a	28#	2.5 2.5 2.5 2.5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. Not fully inspected due to vegetation.	Remove to facilitate the proposed development. n/a	GOOD	GOOD	LOW	HIGH	20+	C 1
G 23	Early-mature Cypress <i>Cupressus sp.</i>	To 8	0+	0+ n/a	To 18	See plan	A linear group of vertical form. No major visible defects.	Remove to facilitate the proposed development. n/a	GOOD	GOOD	LOW	HIGH	20+	C 2
T 24	Semi-mature Holly <i>Ilex aquifolium</i>	6	0	0 n/a	14	2 2 2 2	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects.	Remove to facilitate the proposed development. n/a	GOOD	GOOD	LOW	LOW	20+	C 1
G 25	Early-mature to mature Mixed species <i>Details in observations</i>	To 18	2+	2+ n/a	To 62#	See plan	Overhanging the footpath and the road. A linear boundary group of Sycamore, Horse Chestnut and Common Lime of good form. Minor deadwood noted. Not fully inspected due to vegetation.	No action required. n/a	GOOD	GOOD	HIGH	MOD	40+	1 A 2
T 26	Early-mature Sycamore <i>Acer pseudoplatanus</i>	14	2	3.5 n/a	29	0 3 3.5 3.5	Single-stemmed and leaning with an unbalanced crown and a poor form. A decay cavity is present from the base to 0.6m.	Remove to facilitate the proposed development. Low	GOOD	FAIR	LOW	MOD	10+	C 1
G 27	Early-mature Holly <i>Ilex aquifolium</i>	To 13	0+	0+ n/a	To 30#	See plan	Three trees of a vertical and balanced form. Not fully inspected due to limited access. Not shown on the topographical plan provided.	Remove the two trees shown in red on the plan at Appendix 5 to facilitate the proposed development. n/a	GOOD	GOOD	MOD	LOW	40+	B 2
T 28	Semi-mature Elm <i>Ulmus sp.</i>	8	4	4 n/a	14	3.5 4.5 2.5 5	Overhanging the footpath and the road. Single-stemmed and leaning with an unbalanced crown and a poor form.	Remove to facilitate the proposed development. n/a	GOOD	FAIR	LOW	HIGH	10+	C 1

Tree Ref.	Age Common Name <i>Botanical Name</i>	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 29	Mature Mixed species <i>Details in observations</i>	To 18	3+	3+ n/a	To 55#	See plan	Linear group of Common Lime and Sycamore of good form. Not fully inspected due to vegetation and limited access.	No action required. n/a	GOOD	GOOD	HIGH	MOD	40+	1 A 2
T 30	Mature Common Ash <i>Fraxinus excelsior</i>	19	5	8 n/a	75#	13# 9 10# 9	Twin-stemmed at 5m with a balanced crown. No evidence of significant pruning. Not fully inspected due to vegetation and Ivy.	Remove the lowest branch to the north leaving a 2m long stub in order to facilitate the proposed development. n/a	GOOD	GOOD	MOD	MOD	40+	A 1
G 31	Mature Mixed species <i>Details in observations</i>	To 18	2+	5+ n/a	To 65#	See plan	Two trees (Sycamore and Common Lime) of a good form with one homogeneous canopy. Not fully inspected due to vegetation.	No action required. n/a	GOOD	GOOD	MOD	MOD	40+	1 A 2

Appendix 2: Protective Barrier

A2.1 The protective barrier will be installed in accordance with BS5837: 2012. The default specification of BS 5837: 2012 (pictured below for reference) recommends a vertical and horizontal, scaffold framework, well braced to resist impacts, with vertical tubes at no more than 3m intervals. These should be driven into the ground. Weld mesh panels should be affixed to this framework with scaffold clamps.



Protective Barrier to BS 5837: 2012.

TREE PROTECTION ZONE

KEEP OUT!

TREES ENCLOSED BY THIS FENCE ARE PROTECTED
BY STRICT PLANNING CONDITIONS

ANY DAMAGE CAUSED TO THESE TREES MAY
RESULT IN CRIMINAL PROSECUTION

RESTRICTED AREA:

- THE PROTECTIVE FENCE MUST NOT BE MOVED OR BREACHED
- NO PERSON, MACHINERY, VEHICLE OR PLANT IS PERMITTED WITHIN THE TREE PROTECTION ZONE
- NO MATERIALS SHALL BE STORED WITHIN THE TREE PROTECTION ZONE
- NO EXCAVATIONS ARE PERMITTED WITHIN THE TREE PROTECTION ZONE
- NO SPOIL IS TO BE DEPOSITED WITHIN THE TREE PROTECTION ZONE
- NO FIRES ARE TO BE LIT WITHIN THE TREE PROTECTION ZONE

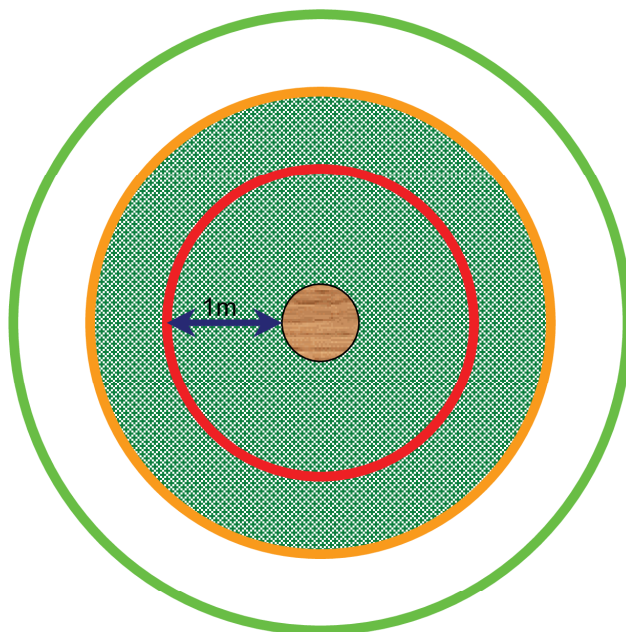
REPORT TREE DAMAGE TO JCA LIMITED ON
01422 376 335

Appendix 3: Utilities and Drainage

- A3.1 Over-ground services should be routed away from areas where they are likely to interfere with the crowns of trees. Similarly any landscaping should take account of over-ground services and mature tree size.
- A3.2 Underground services must be routed outside the RPA of retained trees, unless otherwise specified within this report. NJUG Volume 4 Issue 2 (on the next page) is a set of accepted guidelines for installing services in the proximity of trees. Please note that this is not a substitute for site-specific advice by an arboriculturalist and consultation should be made wherever incursions of RPAs are envisaged. The contents of this report, specifically **Section 4.5**, supersede the set of guidelines on the next page, which are only included for reference.



NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Issue 2



TREE PROTECTION ZONE

Key to Diagram



Trunk of Tree



Spread of canopy or branches



PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with Local Authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.



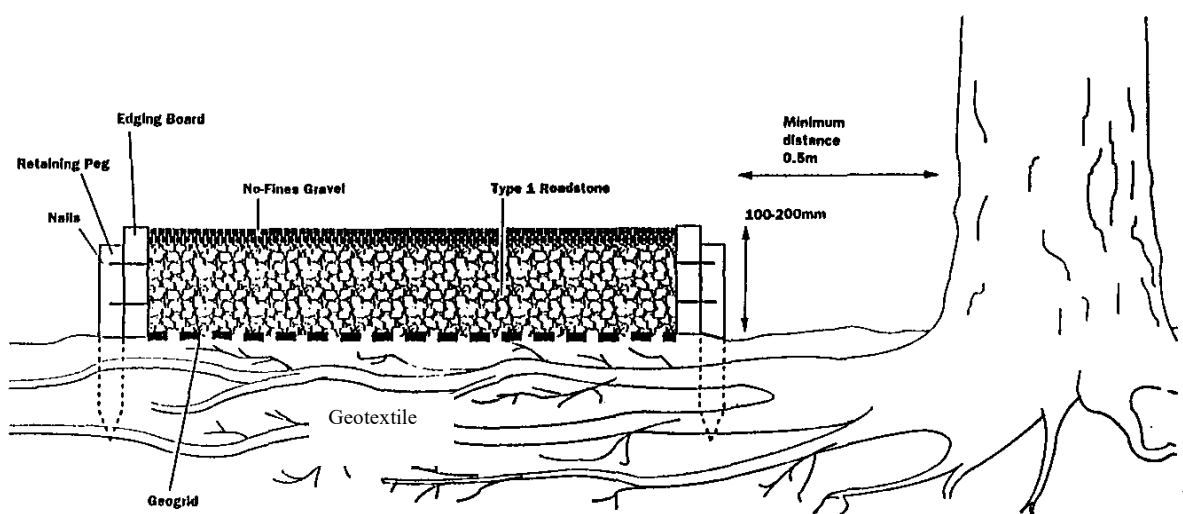
PRECAUTIONARY ZONE – 4 x tree circumference. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with Local Authority Tree Officer if in any doubt.



PERMITTED ZONE – outside of precautionary zone. Excavation works may be undertaken within this zone however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

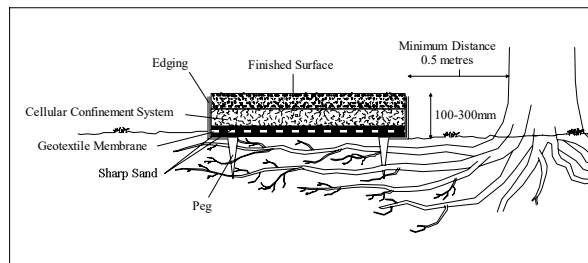
Appendix 4: Permanent Hard Surfaces

- A4.1 This Appendix outlines the options available for constructing No-Dig hard surfaces within the RPA of a tree. The design of such a construction needs to be sensitive to the requirements of tree roots, substantial enough to withstand the expected levels of traffic and practicable in terms of ease of fabrication (See **Section 4.4** for details)
- A4.2 We are not qualified to recommend any particular construction method in terms of durability or structural integrity and any proposed construction should be approved by a qualified structural engineer prior to implementation. However, with regards to trees, we make the following comments:
- Severance of roots and soil compaction should be avoided. However, if it is necessary to sever roots or if they are severed accidentally we must be informed so that we are able to assess and recommend accordingly.
 - Air and water must be able to diffuse into the soil beneath the engineered surface. Toxic substances which could leach into the ground must be avoided, as should substances which affect the pH value of the soil, for example limestone.
- A4.3 **The No-Dig Method:** This involves construction of a surface with no excavation, soil stripping or site grading. All construction takes place above ground level. Preparation is as follows:
- A4.4 Ground vegetation is killed using a suitable herbicide. Care must be taken to select a herbicide which does not damage the tree roots within the treated area. Once the vegetation has died, the dead organic matter should be removed. This helps prevent the future build up of anaerobic conditions or settlement due to decomposition.

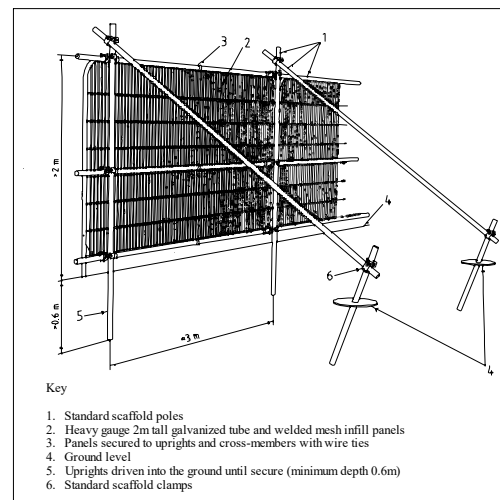


A light duty drive constructed using the *No Dig Method*.

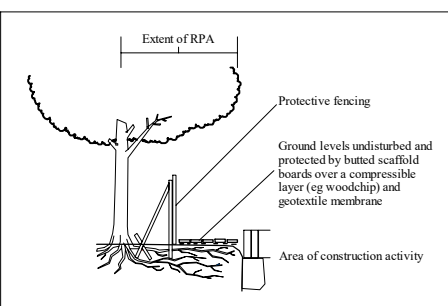
An example of a 'no dig' road construction



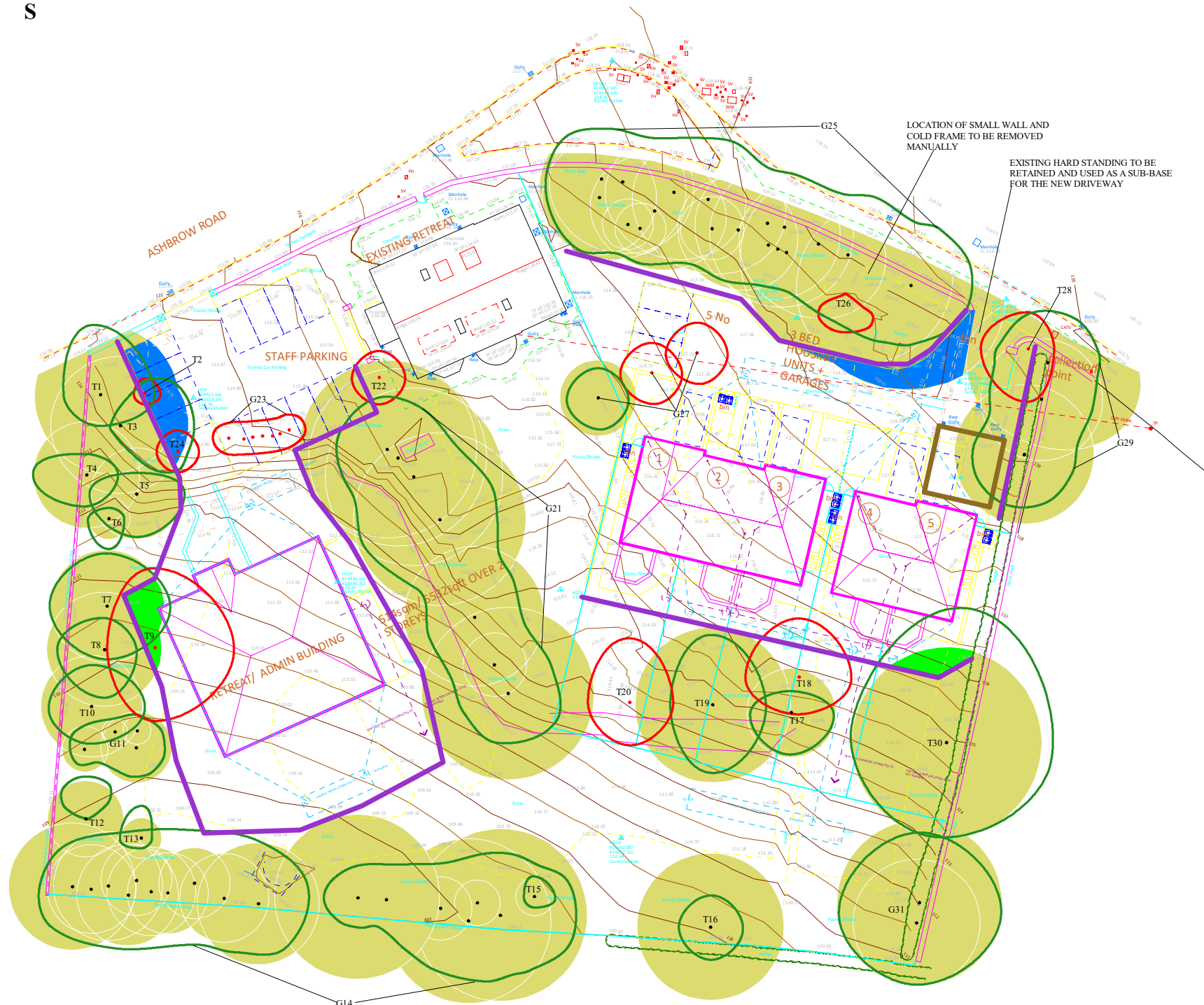
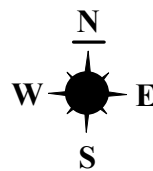
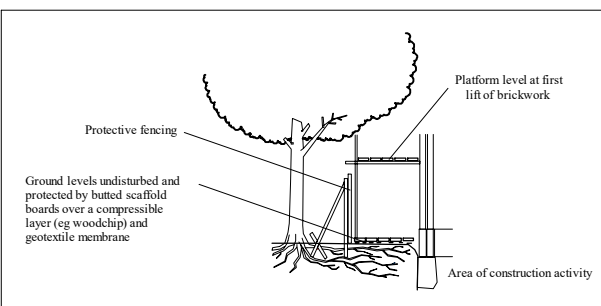
Default specification for a protective barrier



An example of a walkway within the RPA



An example of scaffolding within the RPA



TREE PROTECTION MEASURES

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

UNLESS OTHERWISE STATED IN THE ARBORICULTURAL METHOD STATEMENT, THE RPA NEEDS TO REMAIN UNDISTURBED.

TO ACHIEVE THIS, PROTECTIVE FENCING WILL BE INSTALLED TO ENCLOSE THE RPA TO MAKE A CONSTRUCTION EXCLUSION ZONE (CEZ):

THIS AREA IS TO BE CONSIDERED A RESTRICTED AREA; NO PEDESTRIANS, VEHICLES, THE STORAGE OF MATERIALS, EQUIPMENT OR MACHINERY ARE ALLOWED WITHIN THE CEZ, UNLESS SPECIFIED WITHIN THE ARBORICULTURAL METHOD STATEMENT.

WHERE IT IS NOT POSSIBLE TO ENCLOSE THE RPA WITH THE PROTECTIVE FENCING, GROUND PROTECTION MEASURES WILL NEED TO BE LAID TO MINIMIZE ANY GROUND COMPACTION AND ANY DISTURBANCE TO THE UNDERLYING SOIL.

THE PROTECTIVE BARRIER WILL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES TAKING PLACE AND WILL BE RETAINED IN PLACE UNTIL THE MATERIAL COMPLETION OF DEVELOPMENT.

IT IS IMPORTANT THAT THE PROTECTIVE BARRIER IS CHECKED BY THE LPA OR THE ARBORICULTURAL CONSULTANT PRIOR TO ANY CONSTRUCTION WORKS BEING CARRIED OUT. IF THE TREE PROTECTION MEASURES ARE NOT CORRECTLY INSTALLED OR IF THEY DO NOT COMPLY WITH BS 5837: 2012, THIS COULD RESULT IN DAMAGE BEING CAUSED TO TREES AND CONSEQUENTLY A STOP NOTICE MAY BE SERVED BY THE LPA.

Appendix 5: Tree Protection Plan

ADDRESS: Land off Ashbrow Road,
Huddersfield, West Yorkshire, HD2 1DX.
JCA REF: 17829-C/AJB.

SCALE: 1:500

PAPER SIZE: A3

SURVEYED BY: AJB DRAWN BY: AJB APPROVED BY: EW

	TREE TO BE RETAINED
	TREE TO BE REMOVED
	STEM OF TREE TO BE RETAINED
	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA (RPA)
	ROOT PROTECTION AREA ENCLOSED BY THE PROPOSED HARD STANDING WHERE THE LAYING METHOD OF CONSTRUCTION OR POROUS FINISH MUST BE UTILISED
	PROTECTIVE FENCE LINE (CEZ)
	LOCATION WHERE GROUND PROTECTION MEASURES ARE REQUIRED
	EXISTING GARAGE TO BE REMOVED UNDER ARBORICULTURAL SUPERVISION

JCA Limited
Arboricultural & Ecological Consultants

THIS PLAN IS TO BE PRINTED IN COLOUR
AND READ IN CONJUNCTION WITH THE
JCA ARBORICULTURAL REPORT
(JCA REF: 17829-C/AJB)

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 *LANTRA Accredited PTI.*

27th June 2022

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: jon@jcaac.com**

www.jcaac.com

Report printed on recycled paper

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)

Tree Advice for the Legal Profession

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

Advice for Engineers, Loss Adjusters and Insurers

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

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Advice for Local Authorities and Social Housing

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

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

