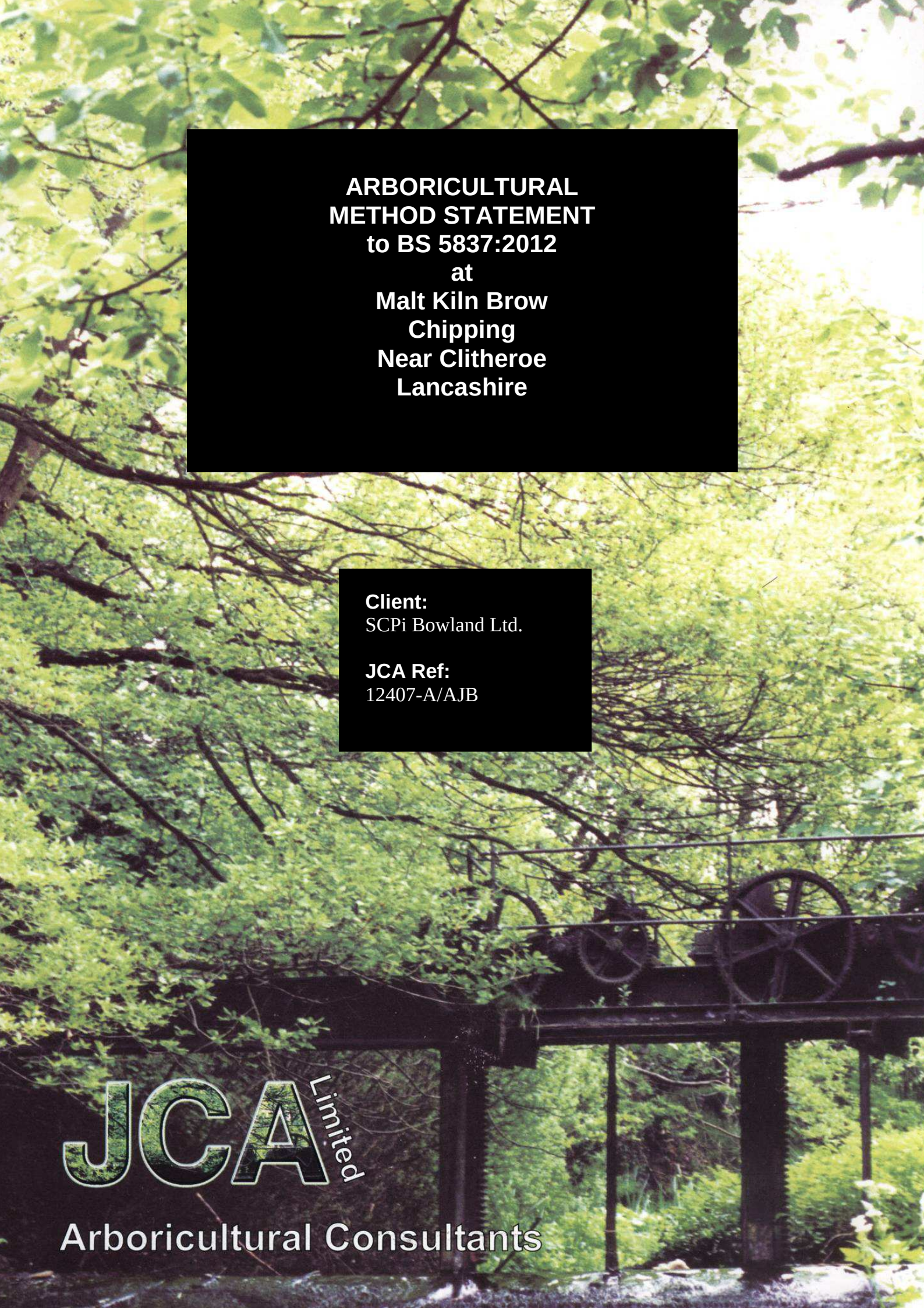


ARBORICULTURAL METHOD STATEMENT to BS 5837:2012 at Malt Kiln Brow Chipping Near Clitheroe Lancashire

Client:
SCPi Bowland Ltd.

JCA Ref:
12407-A/AJB

JCA Limited

Arboricultural Consultants

Contents

1. Introduction

1.1 Purpose of the Method Statement

1.1.1 This Method Statement has been prepared to ensure good practice in the protection of trees during the proposed development at **Malt Kiln Brow**, **Chipping**, **near Clitheroe**.

1.2 Terms of Reference

1.2.1 We are instructed **by SCPi Bowland Ltd.** to prepare a Method Statement for the proposed development, based on our arboricultural report dated 5th of August 2015 (JCA Ref: **12407/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 For a full description of the details of the proposals, please see the Arboricultural Implications Assessment which can be found at **Section 6** within the aforementioned report which should be read in collaboration with this Method Statement

1.2.3 The development layout (Drawing No. **660_Chipping 140220_RevB v2**) has been provided by our client and is the basis for both Tree Protection Plans (Site A and B) found at **Appendix 5**.

1.3 Status of the Method Statement

1.3.1 This 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 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 **T1, T32, T35, G50, G66** and **T88** and the pruning of **T16, T17, T18, G22, T23, T41, T48, T78** and **T85**, for arboricultural reasons

- the removal of **T24, T25, T26, T27, T28, T29, T30, T31, T34, T36, T62, T67, T68, T69, G70, T73, T74, T75** and **T76**, and sections of **H15, G21, G33** and **G63** (as shown in red on the attached plan), to facilitate the proposed development.

2.2 Tree Works During Construction

2.2.1 Damage to trees during the construction phase should be entirely prevented by the erection of a temporary protective barrier, 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**).

2.2.2 If any trees on site are damaged, it should be immediately reported to JCA to agree on appropriate remedial action. Contact numbers for all parties can be found at **Section 7**.

2.3 Tree Works Post Construction

2.3.1 When the construction phase is complete and when the protective barrier has been removed some minor remedial works may be required. This may be for aesthetic purposes, to give clearance for new paths or to provide ground clearance for landscaping schemes.

2.3.2 No post construction remedial works are to be carried out on the trees until prior permission has been granted by the Local Planning Authority.

2.4 Recommendations for Tree Works

2.4.1 All work must be carried out to BS 3998: 2010 - *Recommendations for tree work* and should be carried out by qualified, experienced and, ideally, Arboricultural Association approved contractors who should be adequately insured.

2.4.2 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. 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 Where the proposed development is considered to encroach upon retained trees, the installation of the temporary protective barrier will be the very first job to be undertaken on site following completion of the tree works.

3.1.2 No other work, including soil stripping, excavation, or the bringing onto site of materials or machinery, shall commence until the barrier is installed and inspected. In exceptional circumstances, where construction activity is deemed necessary, a representative from JCA may be informed so that they may be present to oversee such operations.

3.1.3 The protective barrier must be constructed in accordance with BS 5837: 2012 *Trees in relation to design, demolition and construction - Recommendations* and should 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, storage of materials, equipment or machinery are allowed within the CEZ unless specified within this Method Statement**.

3.1.4 The protective barrier will be constructed in accordance with the default specifications of BS 5837: 2012, which recommends 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 barrier details.

3.1.5 Once the barrier is installed, waterproof signs with the sentence '*Protected tree zone, no storage or operations within this are*a' 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**.

3.1.6 No work shall commence until the Local Planning Authority or JCA are satisfied that the protective barrier meets all requirements and gives the go ahead for construction to commence.

3.1.7 Where it is not possible to enclose the entire RPA of a tree with the protective barrier, it will be necessary to lay appropriate ground protection (please refer to **Section 4.1**).

3.2 Protective Barrier During Construction

3.2.1 No operations shall take place which require the removal of part of the protective barrier without prior agreement with the Local Planning Authority or JCA.

3.2.2 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. Relevant contact details can be found at **Section 7**.

3.3 Removal of the Protective Barrier

3.3.1 When the development phase is complete and the main site machinery has been removed, the Local Planning Authority should be invited to inspect the site to give approval for the removal of the protective barrier.

3.3.2 When this approval has been given the protective barrier may be dismantled and removed from site.

3.3.3 It should be noted the same restrictions apply to all RPAs as the CEZ (please refer to **Section 3.1.3**).

4. Construction Phase

4.1 Ground Protection

4.1.1 On this occasion it is not possible to fully enclose the RPA of **T16, T17, T18, G22, T23, T48** and **T77** with the protective barrier and therefore ground protection is required in order to avoid possible root damage or the compaction of the soils by site traffic (including vehicles, machinery and pedestrians).

4.1.2 Where vehicles and machinery are likely to pass over the RPAs, robust ground protection which will distribute the vehicle and machinery weight is to be laid. This will take the form of interlinking, non-slip metal road plates, placed on top of crushed, bedded down, sandstone.

4.1.3 For pedestrian only routes, a less robust but adequate rigid surface is required to be laid. This will take the form wooden boards placed on top of woodchip (100mm in depth).

4.2 Demolition Works

4.2.1 No demolition works are required within the vicinity of any retained tree on site.

4.3 Ground Level Changes

4.3.1 From the information that is available we are aware of no ground level changes which are required within the vicinity of any RPA of any tree on site.

4.4 Construction of Hard Surfaces

4.4.1 Hard surfaces, in the form of access driveways/roads are proposed within the RPA of **T18, G22, T23, T49** and **T77**.

4.4.2 It is recommended that for **T18, G22, T23** and **T49** a minimum-dig method of construction be utilised.

4.4.3 On this occasion, the light use gravel driveway which is to be installed within the RPA of **T77** can be constructed using the no-dig method of construction.

4.4.4 Please refer to **Appendix 4** for example construction guidelines and supporting diagrams.

4.5 Construction of New Buildings

4.5.1 Two proposed new buildings encroach into the RPA of **T18**. In order to minimise root damage to this tree, the new buildings must be constructed upon pile and beam foundations, or a similar foundation type, instead of the more traditional trench/strip foundation.

4.5.2 The rooting activity at the point where the piles are proposed should be investigated carefully by hand excavation in the presence of an arboricultural consultant. Consultations should first be undertaken with a structural engineer to ensure that this method of construction is viable and to assess the minimum diameter piles that would suffice for the development.

4.6 Excavations and Services

4.6.1 Drainage and utilities are to be directed away from trees. Where this is not possible guidance and methodologies on the installation of underground services whilst minimising damage to tree roots is provided at **Appendix 3**.

4.7 Exposed Roots

4.7.1 Any tree roots exposed within the RPA must be left as intact as possible. This can be achieved by carefully digging around the roots using hand tools.

4.7.2 Exposed roots can become desiccated quickly and must therefore be covered with a dry cloth, to prevent freezing overnight, or a wet cloth on warm days.

4.7.3 If roots are required to be severed then clean, straight cuts must be made, in order to minimise the extent of wounding. If roots with a diameter of greater than 50mm are encountered, then a representative from JCA must first be informed to supervise before any further work is undertaken.

4.8 Location of the Site Compound

4.8.1 It is vital that the site compound that typically includes the site office, mess facilities, toilets, storage of materials and parking, is located away from trees. Care must also be taken to prevent contamination with chemical spillages, including petrol, diesel and oils. Cement mixers and toxic materials should not be permitted close to trees.

5. Post Construction Phase

5.1 Completion Meeting

5.1.1 Upon completion of the works as specified in **Section 4**, a JCA consultant will invite the Local Planning Authority representative to meet with them on site to agree on any remedial works required.

5.1.2 Any necessary remedial works will be confirmed in writing and must be carried out in accordance with BS 3998: 2010 - *Recommendations for tree work.*

5.1.3 Due to the large potential penalties for illegally carrying out work to protected trees, JCA recommend that a further check is carried out prior to any works being undertaken post development.

5.2 Post Construction Landscaping

5.2.1 Many of the 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.

5.2.2 Landscaping works should be carried out in such a way as to avoid ground level changes or deep digging. Tractor mounted rotovation or other mechanised cultivation methods must not be used.

5.2.3 Heavy machinery must not be brought into the vicinity of retained trees.

5.2.4 Herbicides should be appropriate for the purpose and must not be used in a way which will damage retained trees or vegetation.

5.3 Mycorrhizal Fungi Inoculation

5.3.1 As the proposed development will encroach into the RPA of **T16, T17, T18, G22, T23** and **T48**, it would be prudent to apply *Mycorrhizal fungi* to the soils around these trees after the construction phase is complete.

5.3.2 *Mycorrhizal fungi* forms a symbiotic relationship with tree roots. A tree root associated with *Mycorrhizae* takes up nutrients more effectively than a non-associated root. The application of *Mycorrhizae* will therefore be beneficial for **T16, T17, T18, G22, T23** and **T48**.

5.4 Tree Planting Scheme

5.4.1 A Tree Planting Scheme has been formalised for this development as part of the planning consent requirements. The planting of these trees may go ahead in the first tree planting period after construction is complete.

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	Install the protective barrier around the trees (as detailed at **Appendix 2** and as shown on the Tree Protection Plan at **Appendix 5**).		
Stage 4	Install ground protection within the RPAs of those trees which are not fully protected by the barrier (as detailed in **Section 4**).		
Stage 5	Have the Local Planning Authority inspect the barrier and ground protection measures prior to any on site construction. Once inspected, the protective barrier and ground protection must not to be moved or breached.		
Stage 6	Undertake the demolition of the existing buildings/removal of existing hard surfaces (as detailed in **Section 4**).		
Stage 7	Construction Phase: Undertake the construction of the proposed development. Pile foundations to be used where the building encroaches into the RPA of **T18**. 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 8	Following the completion of the construction phase and when all site traffic and machinery has left, the protective barrier and ground protection can be removed.		
Stage 9	Post construction remedial tree works to be undertaken including *Mycorrhizal* inoculation.		
Stage 10	Undertake the Tree Planting Scheme.		

7. Relevant Contact Details

Contact Name	Organisation/Detail	Contact Number
Andrew Bussey (Arboricultural Consultant)	JCA Limited	01422 376335
Local Authority Tree Officer	Ribble Valley Borough Council	01200 414499

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 1	Over mature Common Ash *Fraxinus excelsior*	17	3	3 S	84 #	3 3 3 3	Overhanging the car park and the footpath. Multi-stemmed at 3.5m. Previously topped at 5m with re-growth present. Massive hollow with severe decay noted at the base.	Remove as a matter of **low priority**.	FAIR	POOR	MOD	<10	U
G 2	Semi-mature to early-mature Mixed	11	0 +	0+ n/a	To 43	See plan	Group of trees of reasonable form located on the field boundary. Species include Hawthorn, Field Maple, Elder, Elm and Common Ash. Decay cavities, deadwood and bark scars noted. Not fully inspected due to dense vegetation.	Monitor annually.	GOOD	GOOD	MOD	20-40	B
T 3	Early-mature Sycamore *Acer pseudoplatanus*	16	5	5 S	53	4 4 4.5 4.5	Twin-stemmed at 1m with a balanced crown. Occasional pruning wounds. Bark scar with decay noted at 1.5m.	Monitor annually.	GOOD	FAIR	MOD	20-40	C
G 4	Early-mature Common Ash *Fraxinus excelsior*	To 15	3+	4+ S	To 44	See plan	Three trees of vertical form in a tight group with one homogenous crown. Crossing stems noted. Occasional pruning wounds. Acceptable condition at present.	No action required.	GOOD	FAIR	MOD	20-40	C
G 5	Young to mature Mixed	To 18	0 +	0+ n/a	To 80	See plan	Group of trees of good form located on or beyond the boundary line. Species include Hawthorn, Common Ash, Goat Willow, Beech, Sycamore, Common Alder, Holly and Common Oak. Not fully inspected due to dense vegetation.	No action required.	GOOD	GOOD	MOD	40+	B
T 6	Young Common Ash *Fraxinus excelsior*	11	3	3 S	13	2 1 1.5 1	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	LOW	20-40	C
G 7	Semi-mature Mixed	To 11	0 +	0+ n/a	To 20	See plan	Three trees of poor form with no major visible defects. Species include Common Ash, Hawthorn and Holly. Insignificant specimens.	No action required.	GOOD	GOOD	LOW	20-40	C
T 8	Mature Common Ash *Fraxinus excelsior*	13	3	3 N	65 #	6 6# 4.5 5.2	Multi-stemmed at 4m with a balanced crown. Occasional pruning wounds due to crown lifting. Decay cavities and deadwood noted.	Monitor annually.	GOOD	FAIR	MOD	20-40	B
T 9	Early-mature Lombardy Poplar *Populus nigra 'Italica'*	14	8	8 N	28	4 4 3 1.8	Single-stemmed and vertical with an unbalanced crown. Occasional pruning wounds due to crown lifting yet no major visible defects. Minor deadwood noted.	No action required.	GOOD	GOOD	LOW	20-40	C
T 10	Mature Sycamore *Acer pseudoplatanus*	14	1	1 S	92 # at base	6.5 7# 6.3 6.5	Twin-stemmed at 0.5m with a balanced crown. Occasional pruning wounds due to crown lifting yet no major visible defects.	No action required.	GOOD	GOOD	MOD	20-40	B

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 11	Mature Lombardy Poplar *Populus nigra 'Italica'*	19	3	3.5 N	53	5 5 5 5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects. Minor deadwood noted.	No action required.	GOOD	GOOD	MOD	40+	B
T 12	Mature Common Alder *Alnus glutinosa*	12	3	3 E	35 #	4.8# 4.2# 5.3 3	Relatively close to overhead power lines. Twin-stemmed at 3m with a balanced crown which leans towards and overhangs the road. Occasional pruning wounds. Not fully inspected due to limited access and vegetation at the base.	No action required.	GOOD	GOOD	MOD	40+	B
G 13	Early-mature to mature Lombardy Poplar *Populus nigra 'Italica'*	To 19	2 +	2+ n/a	To 65	See plan	A row of 22 trees which are all single-stemmed and vertical with balanced crowns. Occasional pruning wounds yet no major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B
G 14	Semi-mature Common Ash *Fraxinus excelsior*	To 12	0 +	0+ n/a	To 30#	See plan	A group of 3 trees of reasonable form with no major visible defects. The crowns overhang the road. Not fully inspected due to limited access.	No action required.	GOOD	GOOD	LOW	20-40	C
H 15	Early-mature Mixed	To 2.5	0	0 E	To 5#	See plan	A well maintained Hazel, Hawthorn, Elder, Beech, Common Ash and Blackthorn hedgerow. No major visible defects.	Remove the section shown in red on the attached plan in order facilitate the proposed development.	GOOD	GOOD	MOD	40+	C
T 16	Mature Common Ash *Fraxinus excelsior*	16	4	4 S	72 #	6 6 7 7.5	Single-stemmed and vertical with a balanced crown which overhangs the road. Occasional pruning wounds. Moderate deadwood throughout, this may indicate the onset of Ash Die-back. Ivy and the hedge at the base prevented a detailed inspection.	Crown clean to remove the deadwood as a matter of **moderate priority**. Monitor annually.	FAIR	FAIR	MOD	20-40	B
T 17	Over mature Common Ash *Fraxinus excelsior*	20	5	5 E	95 #	9.5 9.5 9.5 9.5	Single-stemmed and vertical with a balanced crown which overhangs the road. No evidence of significant pruning. Moderate deadwood throughout, this may indicate the onset of Ash Die-back. A Sycamore is growing from the base and into the lower crown of the tree. Ivy and the hedge at the base prevented a detailed inspection.	Remove the Sycamore at the base and crown clean to remove the deadwood as a matter of **moderate priority**. Monitor annually.	FAIR	FAIR	MOD	20-40	B
T 18	Over mature Common Ash *Fraxinus excelsior*	19	3	4 n/a	95#	12 # 12 # 12 # 12 #	Multi-stemmed at 4m with a balanced crown. No evidence of significant pruning. Minor deadwood and snapped branch stubs noted throughout. Limited inspection due to vegetation and limited access.	Crown clean to remove the deadwood as a matter of **moderate priority**.	GOOD	GOOD	MOD	40+	B
T 19	Mature Common Ash *Fraxinus excelsior*	13	0.5	0.5 E	44	5 5 6 4	Single-stemmed and leaning with a balanced crown. Occasional pruning wounds due to crown lifting yet no major visible defects.	No action required.	GOOD	GOOD	MOD	20-40	B
T 20	Mature Sycamore *Acer pseudoplatanus*	16	3	1.5 E	49#	6 6 6# 6.5#	Single-stemmed and vertical with a balanced crown which overhangs the road. No evidence of significant pruning and no major visible defects. Not fully inspected due to vegetation.	No action required.	GOOD	GOOD	MOD	40+	B

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
G 21	Young Mixed	To 10 #	0 +	0+ n/a	To 12	See plan	Dense plantation containing Silver Birch, Common Ash, Goat Willow, Rowan, Cherry, Common Oak, Hazel and Common Alder. Not fully inspected due to limited access and dense vegetation.	Remove the section shown in red on the attached plan in order facilitate the proposed development.	GOOD	GOOD	MOD	40+	B
G 22	Young to mature Mixed *Mixed*	To 18	0 +	0+ n/a	To 70 #	See plan	Dense woodland group with crowns which overhang the road in places. Species include Common Ash, Sycamore, Goat Willow, Hawthorn, Elm sp., Norway Maple and Common Alder. Deadwood (particularly on the Common Ash), dead stems, decay cavities and bark scars noted.	Crown clean to remove the deadwood as a matter of **moderate priority**. Monitor annually.	GOOD	GOOD	MOD	40+	B
T 23	Mature Common Ash *Fraxinus excelsior*	18	4	5 E	90#	9# 9# 7# 10#	Overhanging the footpath. Multi-stemmed at 5m with a balanced crown. No evidence of significant pruning. Minor deadwood throughout, this may indicate the onset of Ash Die-back. Not fully inspected due to Ivy and basal vegetation.	Crown clean to remove the deadwood as a matter of **low priority**. Monitor annually.	FAIR	FAIR	MOD	20-40	B
T 24	Young Silver Birch *Betula pendula*	11	4	4 n/a	7	2 1 2 2	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C
T 25	Young Silver Birch *Betula pendula*	9	0.5	0.5 n/a	8	2.5 2.5 2.5 2.5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C
T 26	Semi-mature Norway Spruce *Picea abies*	13	1	1 E	25 #	2.8 1.5 3 2.5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C
T 27	Semi-mature Norway Spruce *Picea abies*	13	1	1 E	18 #	2.5 1.5 3 1	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C
T 28	Early-mature Norway Spruce *Picea abies*	16	2	2 E	35 #	3.2 3.2 3.2 3.2	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	Remove in order to facilitate the proposed development.	GOOD	GOOD	MOD	20-40	C
T 29	Early-mature Common Ash *Fraxinus excelsior*	15	3	3 E	34	5 5 5 5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to restricted access.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C
T 30	Early-mature Goat Willow *Salix caprea*	14	0	0 n/a	28 #	3 3 3 2.5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. Minor bark wound present at the base. Limited inspection due to restricted access.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 31	Early-mature Yew *Taxus baccata*	13	0	0 n/a	35 #	3.5 3.5 3.5 3.5	Multi-stemmed at 1m with a balanced crown. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B
T 32	Mature Horse Chestnut *Aesculus hippocastanum*	12	1	3 E	90#	5# 6# 4 6	Multi-stemmed at 2.5m with a balanced crown. Occasional pruning wounds. Significant die-back due to Bleeding Canker of Horse Chestnut throughout.	Remove as a matter of **moderate priority**.	POOR	POOR	MOD	<10	U
G 33	Mature Mixed	To 20	0 +	0+ n/a	To 90	See plan	Group of trees situated in a private garden. Limited inspection due to restricted access. Species include Scots Pine, Beech, Yew, Cherry sp. and Apple sp. No major visible defects observed.	No action required.	GOOD	GOOD	MOD	40+	B
T 34	Early-mature Yew *Taxus baccata*	13	2	2 W	51 at base	3.5 4 4.8 4	Multi-stemmed at 1m with a balanced crown. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	LOW	40+	B
T 35	Over mature Horse Chestnut *Aesculus hippocastanum*	3.5	2	2 n/a	100#	0.5 0.5 0.5 0.5	Standing dead stem with the crown removed.	Remove as a matter of **low priority**.	POOR	POOR	LOW	<10	U
T 36	Early-mature Norway Spruce *Picea abies*	18	4	4 S	39	4 3 7.2 4	Single-stemmed and leaning with an unbalanced crown. No evidence of significant pruning and no major visible defects. Ivy prevented a detailed inspection.	No action required.	GOOD	GOOD	LOW	20-40	B
T 37	Mature Sycamore *Acer pseudoplatanus*	16	4	3 S	50 # at base	7 7 6 4	Multi-stemmed at ground level with an unbalanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to access.	No action required.	GOOD	GOOD	LOW	20-40	C
G 38	Mature Mixed	To 20	0 +	0+ n/a	To 90	See plan	Group of trees situated in a private garden. Limited inspection due to restricted access. Species include Scots Pine, Beech, Yew, Cherry sp. and Apple sp. No major visible defects observed.	No action required.	GOOD	GOOD	MOD	40+	B
T 39	Over-mature Beech *Fagus sylvatica*	23	0	0 n/a	90 #	12 # 12 # 12 # 12 #	Estimated to be Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to restricted access.	No action required.	GOOD	GOOD	MOD	40+	A
T 40	Early-mature Common Alder *Alnus glutinosa*	13	1.5	1.5 W	45 # at base	3 5 1 4.5	Multi-stemmed at ground level with an unbalanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to access.	No action required.	GOOD	GOOD	LOW	20-40	C

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 41	Mature Common Ash *Fraxinus excelsior*	17	1	1 S	54	6 6 6 7	Multi-stemmed at 4m with a balanced crown. No evidence of significant pruning and no major visible defects. Deadwood noted.	Crown clean to remove the deadwood as a matter of **low priority**.	GOOD	GOOD	LOW	40+	B
T 42	Over-mature Common Ash *Fraxinus excelsior*	24	1	1 S	65 #	9 # 9 # 9 # 9 #	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects. Ivy and restricted access prevented detailed inspection.	No action required.	GOOD	GOOD	MOD	20-40	B
G 43	Young to over-mature Mixed	To 20	0 +	0+ n/a	To 65	See plan	Group of trees of reasonable form. Species include Sycamore, Common Ash, Elder and Hawthorn. Limited inspection due to access and vegetation yet no major visible defects observed.	No action required.	GOOD	GOOD	MOD	40+	B
T 44	Semi-mature Common Oak *Quercus robur*	7	3	3 n/a	18	3 3 3 3	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	LOW	40+	C
T 45	Mature Sycamore *Acer pseudoplatanus*	18	3	3 n/a	72# & 68#	5.8 7# 7.6 8	Twin-stemmed at ground level with a balanced crown. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	MOD	40+	A
T 46	Mature Common Lime *Tilia x europaea*	18	1	1 n/a	82 #	7.5 8# 7.5 7	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	MOD	40+	A
T 47	Mature Sycamore *Acer pseudoplatanus*	17	2	2 n/a	65 #	7 # 7 # 7 # 7 #	Twin-stemmed at 2m with a balanced crown. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B
T 48	Early-mature Common Ash *Fraxinus excelsior*	17	3	3 W	50 #	7 # 7 # 7 # 7 #	Twin-stemmed at 2m with a balanced crown which overhangs the road. No evidence of significant pruning and no major visible defects. Deadwood noted.	Crown clean to remove the deadwood as a matter of **low priority**.	GOOD	GOOD	MOD	20-40	B
T 49	Semi-mature Common Ash *Fraxinus excelsior*	13	4	4 E	To 20	3 0 6 4	Single-stemmed and leaning with an unbalanced crown which overhangs the road. No evidence of significant pruning and no major visible defects. Suppressed by T48.	No action required.	GOOD	FAIR	LOW	10-20	C
G 50	Semi-mature Common Ash *Fraxinus excelsior*	To 7	0+	0+ n/a	To 40 #	See plan	A dead stem and a vertical and balanced tree growing from the riverside retaining wall with the potential to cause future damage to this feature.	Remove as a matter of **low priority**.	POOR	POOR	LOW	<10	U

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
G 51	Semi-mature Cypress sp. *Cupressus sp.*	To 10	0+	0+ E	To 29#	See plan	Situated on adjacent land. Two trees of vertical and balanced form. No major visible defects. Not fully inspected due to limited access.	No action required.	GOOD	GOOD	LOW	20-40	C
T 52	Early-mature Common Oak *Quercus robur*	13	1	1 E	46	5 6 6 5	Single-stemmed and vertical with a balanced crown containing very minor deadwood. No evidence of significant pruning and no major visible defects.	No action required.	GOOD	GOOD	LOW	40+	C
G 53	Semi-mature Mixed	To 10	0 +	0+ n/a	To 16	See plan	Self seeded Elm sp. Goat Willow and Common Ash of poor form and little significance.	No action required.	GOOD	FAIR	LOW	10-20	C
G 54	Semi-mature to mature Mixed	To 18	0 +	0+ n/a	To 55	See plan	A group of waterside trees comprised mainly of Common Alder with occasional Common Ash throughout. No major visible defects. Deadwood and decay cavities with good ecological potential were noted throughout. Limited inspection due to access.	No action required.	GOOD	GOOD	LOW	40+	B
G 55	Young Mixed	To 12	0 +	0+ n/a	To 13	See plan	Single-stemmed trees of low value yet with no major visible defects. Species include Sycamore, Goat Willow, Common Ash and Silver Birch.	No action required.	GOOD	GOOD	LOW	20-40	C
G 56	Semi-mature to early-mature Hawthorn *Crataegus monogyna*	To 8	0 +	0+ n/a	To 30	See plan	Group of overgrown hedgerow trees with no major visible defects.	No action required.	GOOD	GOOD	LOW	20-40	C
G 57	Semi-mature Common Alder *Alnus glutinosa*	To 11	0 +	0+ n/a	To 20	See plan	Waterside trees of reasonable form. Limited inspection due to access.	No action required.	GOOD	GOOD	LOW	20-40	C
T 58	Early-mature Common Alder *Alnus glutinosa*	13	0	0 n/a	30 #	4 4.5 1 2	Single-stemmed and leaning with an unbalanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to access.	No action required.	GOOD	GOOD	LOW	20-40	C
T 59	Mature Common Ash *Fraxinus excelsior*	14	0	0 n/a	45 #	4.5 6 3 4.5	Multi-stemmed at 3m with a balanced crown. No evidence of significant pruning and no major visible defects. Deadwood and decay cavities noted. Limited inspection due to access.	Monitor annually.	GOOD	GOOD	LOW	20-40	C
G 60	Young to mature Mixed	To 18	0 +	0+ n/a	To 70 #	See plan	An area of planted or self-seeded Common Ash, Sycamore, Goat Willow, Hawthorn, Elm sp., Norway Maple and Common Alder. Deadwood, dead stems, decay cavities and bark scars noted. Limited inspection due restricted access.	No action required.	GOOD	GOOD	LOW	40+	B

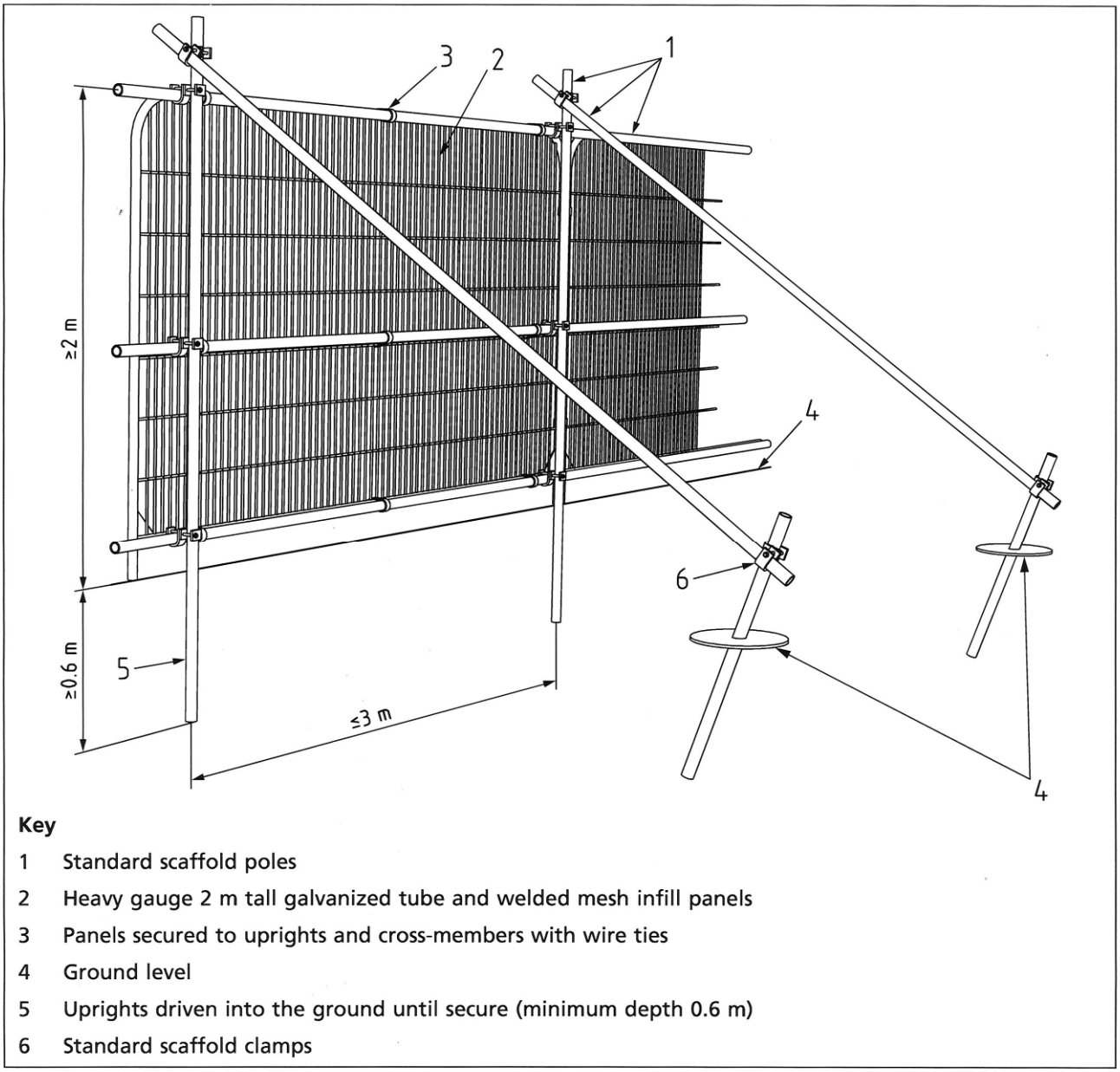
Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
G 61	Young to semi-mature Cherry & Aspen *Prunus sp. & Populus tremula*	To 13	0 +	0+ n/a	To 24	See plan	Planted trees of reasonable form with no major visible defects.	No action required.	GOOD	GOOD	LOW	20-40	C
T 62	Mature Sycamore *Acer pseudoplatanus*	15	2	2 n/a	52	6.3 6.3 6.3 6.3	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	B
G 63	Young to early-mature Mixed	To 14	0 +	0+ n/a	To 50	See plan	Group of mixed planted trees of good quality and with good screening potential. Species include Cherry sp., Hawthorn, Common Ash, Rowan, Sycamore, Common Oak and Silver Birch. Limited inspection due to dense vegetation.	Remove the section shown in red on the attached plan in order facilitate the proposed development.	GOOD	GOOD	MOD	20-40	B
G 64	Young to semi-mature Mixed	To 13	0 +	0+ n/a	To 30	See plan	Riverside trees of low value yet with no major visible defects. Species include Common Alder, Elm sp., Goat Willow and Elder.	No action required.	GOOD	GOOD	LOW	20-40	C
G 65	Young to mature Mixed	To 17	0 +	0+ n/a	To 45	See plan	Group of attractive riverside trees of good value with crowns which overhang the road in places. Species include Sycamore, Copper Beech, Elm sp. and Willow sp. Limited inspection due to restricted access.	No action required.	GOOD	GOOD	MOD	20-40	B
G 66	Young to early-mature Mixed	To 15	0 +	0+ n/a	To 30	See plan	Group of riverside trees growing against and from the top of the retaining wall. Species include Common Alder, Cherry sp., Sycamore and Elm sp. *Phytophthora* noted within the group.	Remove as a matter of **low priority**.	FAIR	POOR	LOW	<10	U
T 67	Mature Common Alder *Alnus glutinosa*	17	4	4 W	62 #	5 # 6 # 6 # 6 #	Waterside tree which is single-stemmed and vertical with a balanced crown which overhangs the road. No evidence of significant pruning and no major visible defects. Limited inspection due to waterside location.	Remove in order to facilitate the proposed development.	GOOD	GOOD	MOD	20-40	B
T 68	Mature Sycamore *Acer pseudoplatanus*	17	0	0 n/a	To 50 #	5 8 4 5	Waterside tree which is twin-stemmed at ground level with a balanced crown which overhangs the road. No evidence of significant pruning. Limited inspection due to access.	Remove in order to facilitate the proposed development.	GOOD	GOOD	MOD	20-40	B
T 69	Early-mature Common Alder *Alnus glutinosa*	15	3	3 n/a	To 40 #	6 6 4 3	Waterside tree which is multi-stemmed at ground level with a balanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to access.	Remove in order to facilitate the proposed development.	GOOD	GOOD	MOD	20-40	B
G 70	Young to semi-mature Mixed	To 12	0 +	0+ n/a	To 20	See plan	Single-stemmed trees of low value. Species include Common Alder, Sycamore, Elm sp. and Common Ash.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 71	Mature Common Ash *Fraxinus excelsior*	14	4	4 n/a	48 #	6 # 6 # 6 # 6 #	Twin-stemmed at 2m with a balanced crown which overhangs the road. Multiple pruning wounds due to crown lifting yet no major visible defects. Limited inspection due to restricted access.	No action required.	GOOD	GOOD	MOD	20-40	B
G 72	Young to mature Mixed	To 17	0 +	0+ n/a	To 70 #	See plan	A group of waterside Common Ash, Sycamore, Norway Spruce, Beech and Hawthorn. Limited inspection due to restricted access.	No action required.	GOOD	GOOD	MOD	40+	A
T 73	Early-mature Sycamore *Acer pseudoplatanus*	6	0	0 n/a	29 #	3.5 # 4 # 3.5 # 3 #	Growing on the top of waterside retaining wall. Twin-stemmed at ground level with a balanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to riverside location.	Remove in order to facilitate the proposed development.	GOOD	GOOD	MOD	20-40	C
T 74	Semi-mature Crack Willow *Salix fragilis*	6	0	0 n/a	34#	3 3.2 5 # 4 #	Growing on the top of waterside retaining wall. Twin-stemmed at ground level with a balanced crown. No evidence of significant pruning and no major visible defects. Minor deadwood. Limited inspection due to riverside location.	Remove in order to facilitate the proposed development.	GOOD	GOOD	MOD	20-40	C
T 75	Semi-mature Common Ash *Fraxinus excelsior*	7	3	3 n/a	17	3 # 3 # 3 # 3 #	Growing from the base of T76 on the top of waterside retaining wall. Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. Limited inspection due to riverside location.	Remove in order to facilitate the proposed development.	GOOD	FAIR	LOW	10-20	C
T 76	Early-mature Hawthorn *Crataegus monogyna*	4.8	0.5	0.5 n/a	35# at base	4.3 3 # 4.2 3.3	Growing on the top of waterside retaining wall. Multiple stemmed at ground level with a balanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to riverside location.	Remove in order to facilitate the proposed development.	GOOD	GOOD	LOW	20-40	C
T 77	Over-mature Common Alder *Alnus Glutinosa*	5.8	2	2 n/a	62	5# 4.3 4.3 4.3	Multiple stemmed at 5.5 metres with a balanced crown. No evidence of significant pruning. Significant decay cavities to lower stem. The main stem has snapped out at 3m and has large decay cavity at this point. The defects noted present a good ecological potential.	Monitor annually.	GOOD	POOR	LOW	20-40	B
T 78	Over-mature Common Alder *Alnus Glutinosa*	14	2	2 n/a	76	6 6 6 6.1	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. Slight die-back to upper crown. Slight decay noted to buttress to the north and the south. 2 decay cavities noted at 3.5m. The defects noted present a good ecological potential.	Crown clean to remove the deadwood as a matter of **low priority**. Monitor annually.	FAIR	FAIR	LOW	20-40	B
T 79	Early-mature Common Alder *Alnus Glutinosa*	4.8	1.5	1.5 n/a	36	3# 2.6 3# 3#'	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. Large vertical decayed hollow to main stem from base to 2.5 metres. The defect noted presents a good ecological value.	Monitor annually.	GOOD	POOR	LOW	20-40	C
G 80	Semi-mature to mature Hawthorn and Alder *Crataegus monogyna and Alnus sp.*	To 6.5	0	0 n/a	To	See plan	Overgrown hedgerow with intermittent individual trees of good form and good ecological value. No major visible defects. Limited inspection due to barbed wire fence and vegetation.	No action required.	GOOD	GOOD	LOW	10-20	B

Tree Ref.	Age Species *Latin Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 81	Over-mature Common Alder *Alnus Glutinosa*	6	2	0.5 N	55#	4.8 4.8 5# 4.8	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. Decay at base leads to hollow stem. Severe decay leads to an additional hollow stem at 2.8m. The defects noted present a good ecological value. Limited inspection due to barbed wire fence.	Monitor annually.	GOOD	GOOD	LOW	10-20	C
T 82	Over-mature Common Alder *Alnus Glutinosa*	9	2.8	1 NE	68#	5.5# 5.6 6# 6#	Twin-stemmed at 5m with a balanced crown. No evidence of significant pruning. Two decay cavities noted at 1.8m. Limited inspection due to barbed wire fence.	Monitor annually.	GOOD	GOOD	LOW	20-40	A
T 83	Mature Common Alder *Alnus Glutinosa*	8.5	2.2	1 S	49#	6# 6.4 6# 6.9	Single-stemmed with a slight lean and a balanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to barbed wire fence.	No action required.	GOOD	GOOD	LOW	40+	B
T 84	Over-mature Common Alder *Alnus Glutinosa*	15	3	1.5 S	100#	6# 7.1 9# 6.8	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects. Limited inspection due to barbed wire fence and vegetation.	No action required	GOOD	GOOD	LOW	40+	A
T 85	Over-mature Sycamore *Acer pseudoplatanus*	19	2	2 n/a	115#	11# 7.5# 9# 8	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning and no major visible defects. Minor deadwood. Limited inspection due to barbed wire fence.	Crown clean to remove the deadwood as a matter of **low priority**.	GOOD	GOOD	MOD	40+	A
G 86	Semi-mature Elder, Hawthorn *Sambucus nigra, Crataegus monogyna*	To 4	1	1 n/a	To 13	See plan	2 trees of low value, no major visible defects.	No action required.	GOOD	GOOD	LOW	10-20	C
T 87	Over-mature Common Alder *Alnus Glutinosa*	7	2	2 n/a	78	2 3 2 6	The crown of this tree has snapped out at approximately 6m leaving an unbalanced tree. The remaining stem is hollowed at the top and has good ecological potential.	Monitor annually.	FAIR	POOR	MOD	10-20	C
T 88	Over-mature Common Ash *Fraxinus excelsior*	21	1	1 n/a	90#	11# 6# 6 10.5	Multi-stemmed at 6m with a balanced crown. No evidence of significant pruning. Many decay cavities present throughout the crown. Vast internal decay to base leads to large hollow within base of main stem. The decay appears to have destroyed over 70% of the live wood, as such; this tree is likely to be structurally unsound and is likely to collapse. Please note that this tree has a good ecological value and also has bat roost potential.	Dismantle leaving a 7m wildlife stick prior to the tree collapsing on the adjacent T89 which is regarded as a high retention category specimen. This work is of a **moderate priority**.	GOOD	GOOD	MOD	<10	U
T 89	Over-mature Sycamore *Acer pseudoplatanus*	19	2.5	2 N	105#	11# 12# 9# 8.5	This tree appears to be situated on adjacent land. Twin-stemmed at 5m with a balanced crown. No evidence of significant pruning. No major visible defects. Minor deadwood.	No action required.	GOOD	GOOD	MOD	40+	A

Appendix 2: Protective Barrier

A2.1 The protective barrier will be appropriate to the degree and proximity of likely construction works. The default specification of BS 5837: 2012 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 - See **Figure 1** below.



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 1: 'Protective Barrier to BS 5837: 2012'.

TREE PROTECTION ZONE

NO STORAGE OR OPERATIONS WITHIN THIS AREA

KEEP OUT

RESTRICTED ACCESS
NO VEHICLES
NO STORAGE OF MATERIALS

REPORT TREE DAMAGE TO JCA LTD ON
01422 376 335

Appendix 3: Utilities and Drainage

A3.1 Over-ground services should ideally be routed away from areas where they are likely to interfere with the crowns of mature trees. Similarly any landscaping should take account of over-ground services and mature tree size.

A3.2 *NJUG 10: Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees* is a principle set of guidelines on working near trees for the utilities sector and should be considered when installing services.

A3.3 New underground services should be grouped together and routed away from Root Protection Areas. Where this is not possible, techniques should be adopted which avoid the severance of many roots. Some examples are listed below:

Radial trenching: This is illustrated in **Figure 2** below. Trenches should be hand-dug and kept as narrow as possible. They should not extend to within 1m from the base of the tree trunk. Exposed roots larger than 25mm in diameter should be retained with their bark intact. A mechanical mole should ideally be used for the section beneath the tree. Our representative should be informed in advance of such operations so that monitoring arrangements can be made.

Mechanical Mole: Pits are excavated beyond the RPA and the mechanical device is sent through the protected area at a depth of no less than 0.6m. Machinery should be selected which can be externally lubricated by water rather than oil etc.

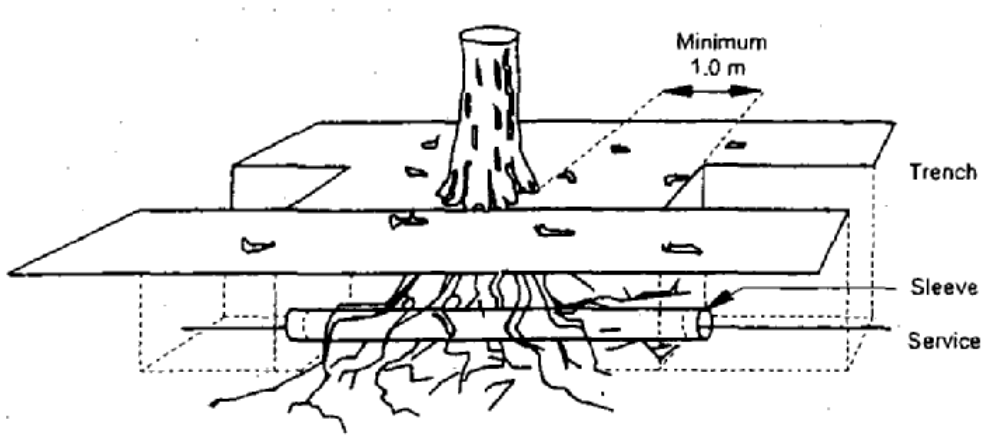


Figure 2: Radial Trenching

Appendix 4: Permanent Hard Surfaces

A4.1 This Appendix outlines the options available for constructing hard surfaces within the RPA of a tree. Two methods are acceptable; the No-Dig Method (for **T77**) and the Minimum Dig Method (for **T18, G22, T23** and **T49**). 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.

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 (see **Figure 3** below). 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.

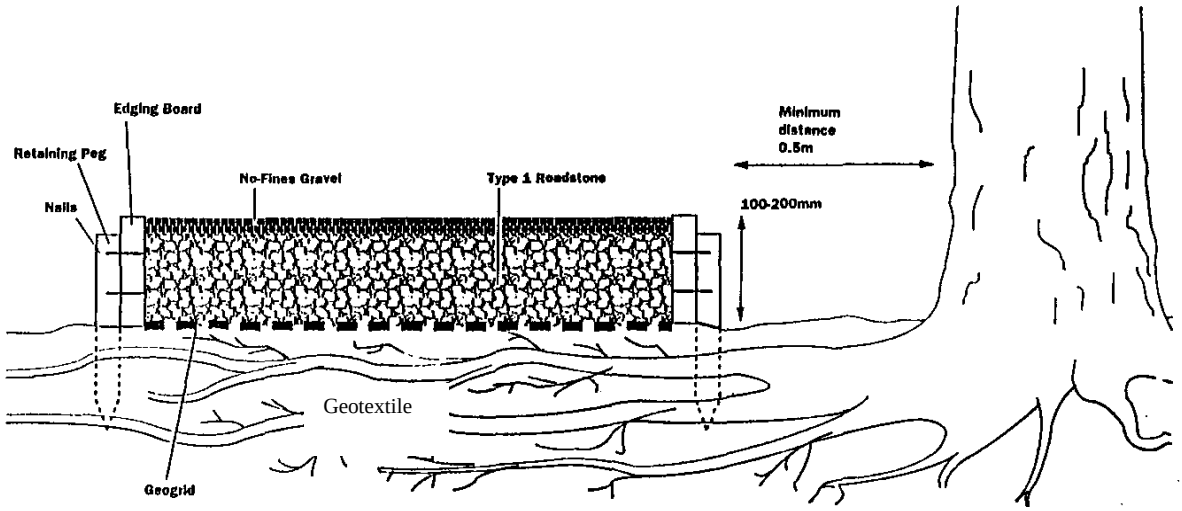


Figure 3: A light duty drive constructed using the ***No Dig Method.***

Appendix 4: Permanent Hard Surfaces (Continued)

A4.5 **The Minimum Dig Method:** It is acceptable to excavate a small amount of soil where site conditions allow (see **Figure 4** below). The relative distance from the trees to the surface, and the size and vigour of the trees must be considered.

A4.6 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.

A4.7 Layers of soil are then removed carefully and in the presence of an arboricultural consultant. No more than 10cm of soil is to be removed before the ground is inspected by the consultant. Depending on the presence of roots it may then be acceptable to remove a further 10cm of soil.

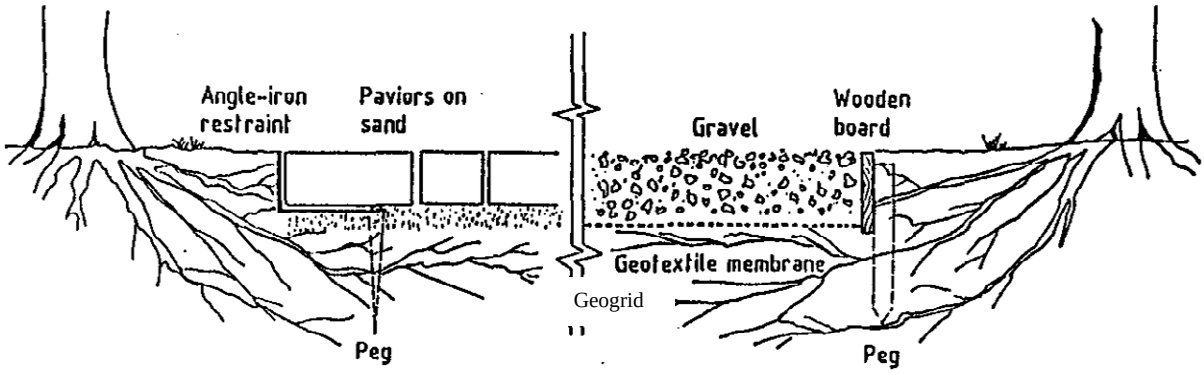
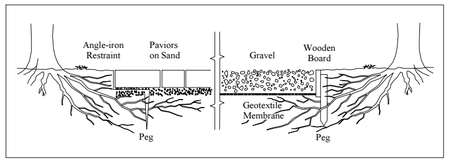
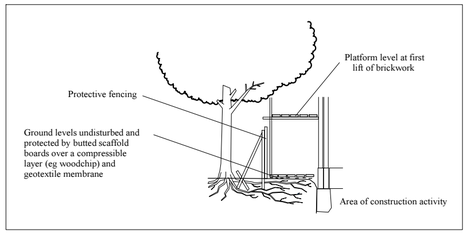


Figure 4: A light duty drive constructed using the ***Minimum Dig Method.***

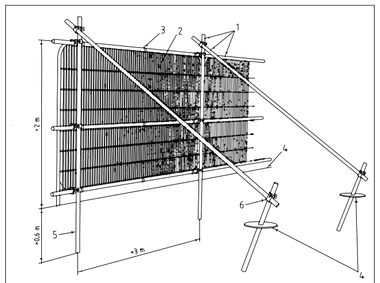
Examples of the 'minimum dig' road construction



An example of scaffolding within the RPA



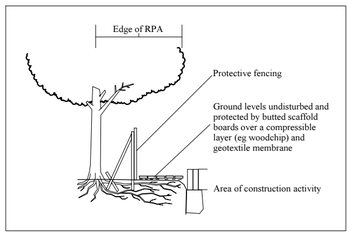
Default specification for a protective barrier



Key

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3. Panels secured to uprights and cross-members with wire ties
4. Ground level
5. Uprights driven into the ground until secure (minimum depth 0.6m)
6. Standard scaffold clamps

An example of a walkway within the RPA



Appendix 5: Site-A Tree Protection Plan

ADDRESS: Malt Kiln Brow, Chipping, Near Clitheroe, Lancashire.
JCA Ref: 12407-A/AJB.

SCALE: 1:1000	PAPER SIZE : A2
SURVEYED BY: AJB / DRAWN BY: AJB / APPROVED BY: TT	
SCALE : 1:500	PAPER SIZE : A2

	TREE TO BE RETAINED
	TREE TO BE REMOVED
	STEM OF TREE TO BE RETAINED
	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA
	PROTECTIVE FENCE LINE (CEZ)
	PROPOSED DEVELOPMENT AREA BOUNDARIES
	PROPOSED PLANTING
	AREA OF RPA NOT PROTECTED BY FENCING. NO MATERIALS SHOULD BE STORED HERE. GROUND COMPACTION MUST BE AVOIDED. SPECIAL SURFACES /CONSTRUCTION TECHNIQUES MUST BE CONSIDERED WHEN WORKING/CONSTRUCTING WITHIN THESE AREAS AND ONLY HAND EXCAVATIONS ARE PERMITTED

JCA Limited
Arboricultural & Forestry Consultants

0 1 10 20 30 40 50 100 metres

Appendix 5: Site Plan-B
Tree Protection Plan

ADDRESS: Malt Kiln Brow, Chipping, Near Clitheroe, Lancashire.
JCA Ref: 12407-A/AJB.

SCALE : 1:500	PAPER SIZE : A2

	TREE TO BE RETAINED
	TREE TO BE REMOVED
•	STEM OF TREE TO BE RETAINED
•	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA
	PROPOSED DEVELOPMENT
	PROPOSED PLANTING
	AREA OF RPA NOT PROTECTED BY FENCING. NO MATERIALS SHOULD BE STORED HERE, GROUND COMPACTION MUST BE AVOIDED, SPECIAL SURFACES /CONSTRUCTION TECHNIQUES MUST BE CONSIDERED WHEN WORKING/CONSTRUCTING WITHIN THESE AREAS AND ONLY HAND EXCAVATIONS ARE PERMITTED

JCA Limited
Arboricultural & Forestry Consultants

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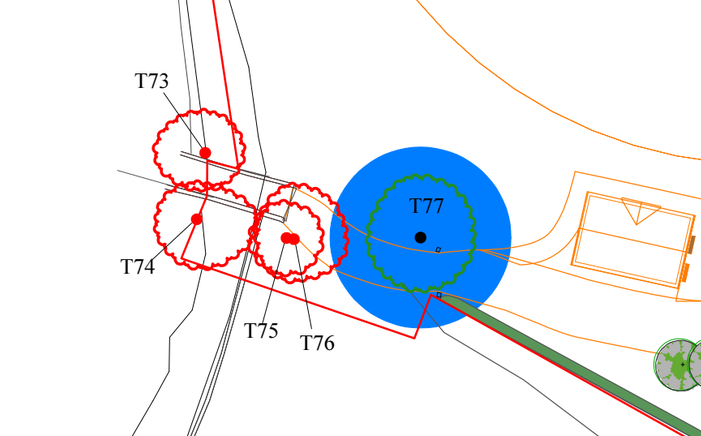
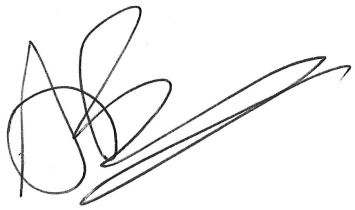
An example of a 'no dig' road construction



0 1 5 10 15 20 30 40 50 metres

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.

5th August 2015

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

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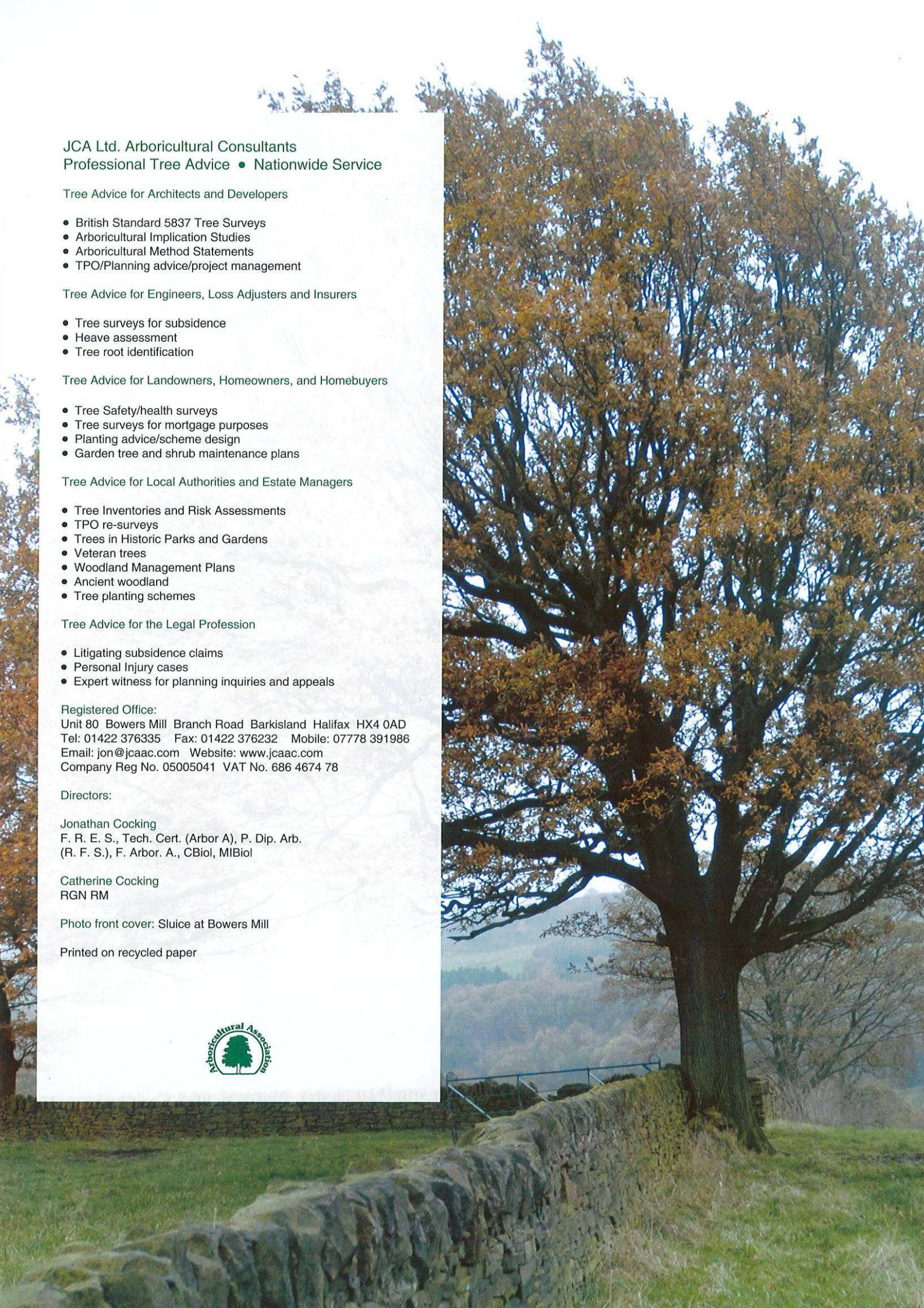

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- Personal Injury cases
- Expert witness for planning inquiries and appeals

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Photo front cover: Sluice at Bowers Mill

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