

**ARBORICULTURAL METHOD STATEMENT  
to BS 5837:2012  
at  
Clayton Fields  
Huddersfield  
HD2 2AF**

**Client:**  
Prospect Estates

**Client Address:**  
Prospect Court  
2 Courthouse Street  
Otley  
LS21 1AQ

**Client Telephone:**  
01943 850111

**JCA Ref:**  
11854e/JC/TT – Rev 1



## Contents

<b>1. Introduction .....</b>	<b>3</b>
1.1 Purpose of the Method Statement.....	3
1.2 Terms of Reference .....	3
1.3 Status of the Method Statement.....	3
<b>2. Tree Works Prior, During and Post Construction.....</b>	<b>4</b>
<b>3. The Protective Barrier Prior, During and Post Construction .....</b>	<b>6</b>
<b>4. Construction Phase .....</b>	<b>8</b>
4.1 Demolition Works .....	8
4.2 Ground Level Changes .....	8
4.3 Construction of Hard Surfaces .....	8
4.4 Construction of New Buildings .....	9
4.5 Excavations and Services .....	9
4.6 Location of the Site Compound.....	9
<b>5. Post Construction Phase .....</b>	<b>10</b>
5.1 Completion Meeting.....	10
5.2 Post Construction Landscaping .....	10
5.3 Tree Planting Scheme.....	10
<b>6. Timescale of Works .....</b>	<b>11</b>
<b>7. Relevant Contact Details .....</b>	<b>12</b>
<b>Appendix 1: Tree Works Schedule .....</b>	<b>14</b>
<b>Appendix 2: Protective Barrier .....</b>	<b>15</b>
<b>Appendix 3: Utilities and Drainage.....</b>	<b>17</b>
<b>Appendix 4: Permanent Hard Surfaces .....</b>	<b>19</b>
<b>Appendix 5: Tree Protection Plan.....</b>	<b>20</b>

## 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 proposed development at **Clayton Fields in Huddersfield**.

### 1.2 Terms of Reference

- 1.2.1 JCA Limited are instructed by **Prospect Estates** to prepare a Method Statement for the proposed development, based on our arboricultural report dated 26<sup>th</sup> September 2014 (JCA Ref: 11854/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 The proposed development will consist of the construction of 41 residential properties.
- 1.2.3 Access roads, footpaths, service routes, garages and areas of hard and soft landscaping are amongst the other ancillary aspects of this development.
- 1.2.4 The following drawing has been provided and this is the basis of the Method Statement and the Tree Protection Plan at **Appendix 5**:
- Development Layout (Drawing No. **1414- 101 - Rev Z**).

### 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 all the necessary arboricultural works, as described at **Appendix 1**.

2.1.2 The tree works include:

- The removal of **T11, T12, T13, T14, T15, G16, G18, T20, T21, T22, T23, T24, G26, T27, T28, T30, T31, T32, T33, T34, H36** (individuals at the southern end only), **T39, T40, T45** and **T46**.
- The pruning of **T7, T8, T9, T10, T17, T25, G37, G38, T41, T42, T43** and **T44**.
- The pruning of selective individuals within **W29**, as detailed below:

**W29I**, an Oak tree located to the rear of Plot 38 has a significant amount of deadwood, especially within its lower crown. The removal of this deadwood will provide clearance from the proposed dwelling.

**W29J**, a Sycamore tree located to the rear of Plot 38 will require crown lifting to 7m and crown cleaning to remove any deadwood. The south side of the canopy will need to be pruned back by 5m to provide clearance from the new dwelling.

**W29K**, a Sycamore tree located to the rear of Plot 38 will need to be pruned back on the south side of its canopy by 5m, to provide clearance from the new dwelling.

**W29L**, a Beech tree located to the rear of Plot 40 will require crown lifting to 7m, which will also remove a crossing branch.

**W29M**, an Ash tree located to the rear of Plot 40 requires a crown clean/remedial prune to remove deadwood and epicormic growth.

**W29N**, an Ash tree located to the rear of Plot 40 will require the removal of one branch at an approximate height of 10m on the south side of the tree. The branch to be removed is the lowest one on the south side of the tree and is approximately 100mm in diameter.

## 2.2 Tree Works During Construction

- 2.2.1 No tree works are required during 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 Should however any trees on site be 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 Tree Works Post Construction

- 2.3.1 Any post construction remedial works must be applied for via a tree work application sent to the council.
- 2.3.2 No post construction tree works are to be carried out until permission has been granted by the Local Planning Authority.

## 2.4 Recommendations For Tree Works

- 2.4.1 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.
- 2.4.2 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.
- 2.4.3 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 undertaken on site following the completion of the tree works (**Section 2.1**). This barrier may comprise of protective fencing, ground protection, or a combination of both, as detailed below.
- 3.1.2 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.
- 3.1.3 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, storage of materials, equipment or machinery are allowed within the CEZ unless specified within this Method Statement.**
- 3.1.4 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 (Fig 1)** for protective fencing details.
- 3.1.5 Once the protective 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**.
- 3.1.6 In order to afford **T7** and **T8** maximum protection during the main construction phase, the RPAs of these trees will be completely enclosed by the protective fencing. In order to construct the new footpath between these trees, the fencing will need to be realigned, as detailed on the Tree Protection Plan at **Appendix 5**. The construction of the footpath and realignment of the protective fencing will therefore take place after the main construction phase is complete and only when it is time for the footpath to be constructed.

## 3.2 Ground Protection

- 3.2.1 Where it is not possible to enclose the entire RPA of a tree with protective fencing, 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 Ground protection is required adjacent to **T7** and **T8**, when the protective fencing has been realigned to the Phase 2 position (as detailed in **Section 3.1.6**), to **T25**, to trees within **W29** (to the rear of Plot 38 and Plot 40), to **T35** and to **G37**.
- 3.2.4 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 e.g. interlinking, non-slip metal road plates, placed on top of crushed, bedded down, sandstone.
- 3.2.5 For pedestrian only routes, a less robust but adequate rigid surface is required to be laid e.g. wooden boards placed on top of woodchip (100mm in depth minimum).

## 3.3 Protective Barrier During Construction

- 3.3.1 With exception to the fencing adjacent to **T7** and **T8**, which requires realigning to allow for the construction of the footpath, 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.
- 3.3.2 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**.

## 3.4 Removal of the Protective Barrier

- 3.4.1 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 protective barrier.
- 3.4.2 When this approval has been given the protective barrier may be dismantled and removed from site.
- 3.4.3 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 Demolition Works

4.1.1 No demolition works are required adjacent to retained trees.

### 4.2 Ground Level Changes

4.2.1 No ground level changes are required within the RPAs of those trees to be retained on this site. As such no mitigation actions are considered necessary.

### 4.3 Construction of Hard Surfaces

4.3.1 Hard surfaces, in the form of the main access road, a private driveway/turning head (Plot 40), garden paving areas (Plot 38 and Plot 40) and public footpaths, are proposed within the RPA of **T7, T8, W29** (at the rear of Plot 40), **T35, G37** and **T41**. A no-dig 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 In order 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 The footprint of the proposed building of Plot 38 encroaches into the RPA of an Oak tree and a Sycamore within **W29**. In order to minimise root damage to these trees, a specialist foundation design e.g. pile and beam, will be used instead of the more traditional trench/strip foundation.

## 4.5 Excavations and Services

4.5.1 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. All utilities must therefore be located outside the RPA of retained trees. 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

4.5.2 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. 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 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 which may be 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*.

### 5.2 Post Construction Landscaping

- 5.2.1 Following completion of the main construction phase, the protective fencing and ground protection may be removed and the landscaping phase can commence.
- 5.2.2 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.
- 5.2.3 Landscaping works should 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.
- 5.2.4 Heavy machinery is not permitted in the vicinity of retained trees, unless otherwise stated in this method statement.
- 5.2.5 Herbicides should be appropriate for the purpose and should not be used in such a way as to damage any retained trees or vegetation.
- 5.2.6 If in doubt, regarding the impact of proposed landscape operations, please contact the appointed arboriculturalist.

### 5.3 Tree Planting Scheme

- 5.3.1 The planting of 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
<b>Stage 1</b>	All requirements listed in the planning consent are approved by the Local Authority planning office.		
<b>Stage 2</b>	Undertake all the tree works (as detailed at <b>Appendix 1</b> ).		
<b>Stage 3</b>	Install the temporary protective fencing around the trees (as detailed at <b>Appendix 2</b> and as shown on the Tree Protection Plan at <b>Appendix 5</b> ).		
<b>Stage 4</b>	Install ground protection within the RPAs of those trees which are not fully protected by the fencing (as detailed in <b>Section 3.2</b> ).		
<b>Stage 5</b>	Have the Local Planning Authority 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.		
<b>Stage 6</b>	Construction Phase:  Specialist foundations e.g. pile and beam foundations are to be used for Plot 38.  Install permanent hard surfaces within the RPA of <b>W29, T35, G37</b> and <b>T41</b> whilst undertaking suitable measures to avoid root damage and soil compaction (as detailed in <b>Section 4</b> and at <b>Appendix 4</b> ).		
<b>Stage 7</b>	Realign the temporary protective fencing around <b>T7</b> and <b>T8</b> to the Phase 2 position (as detailed in <b>Section 3.1.6</b> and as shown on the Tree Protection Plan at <b>Appendix 5</b> ).  Install ground protection where the RPAs of <b>T7</b> and <b>T8</b> are not fully protected by the Phase 2 fencing (as detailed in <b>Section 3.2</b> ).		
<b>Stage 8</b>	Have the Local Planning Authority inspect the Phase 2 fencing and ground protection measures prior to the construction of the footpath within the RPA of <b>T7</b> and <b>T8</b> . Once inspected, the Phase 2 protective fencing and ground protection must not to be moved or breached.		
<b>Stage 9</b>	Install the permanent hard surface footpath within the RPA of <b>T7</b> and <b>T8</b> whilst undertaking suitable measures to avoid root damage and soil compaction (as detailed in <b>Section 4</b> and at <b>Appendix 4</b> ).		
<b>Stage 10</b>	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.		
<b>Stage 11</b>	Undertake the Tree Planting Scheme.		

## 7. Relevant Contact Details

Contact Name	Organisation/Detail	Contact Number
Jon Cocking Arboricultural Consultant	JCA Limited	01422 376335
Joe Robertson Local Authority Tree Officer	Kirklees Council	01484 221 000
John Crompton Architect	Loroc Architects	0113 233 7755
TBC Site Manager	TBC	TBC

# Appendices

Tree Ref.	Age Species <i>Latin Name</i>	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
						N	W	E							
H 1	Semi-mature Beech <i>Fagus sylvatica</i>	To 3	0	0 n/a	To 7#	See plan			Situated on adjacent land. A garden boundary hedge. No major visible defects.	No action required.	GOOD	GOOD	LOW	20-40	C
H 2	Young Leylandii <i>X Cupressocyparis leylandii</i>	To 2	0	0 n/a	To 5#	See plan			Situated on adjacent land. A garden boundary hedge. No major visible defects.	No action required.	GOOD	GOOD	LOW	20-40	C
T 3	Early-mature Sycamore <i>Acer pseudoplatanus</i>	13	5	0 S	55#	4.5#	5.5#	5#	Overhanging the public highway and the footpath. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds due to crown lifting. Ivy and vegetation prevented a detailed inspection	No action required.	GOOD	GOOD	MOD	20-40	B
T 4	Early-mature Elm <i>Ulmus sp.</i>	10	1	1 NE	48 at base	5.5	5	7#	Overhanging the public highway, footpath and adjacent street light. Twin-stemmed at 0.5m with a balanced crown. Occasional pruning wounds due to crown lifting. Both co-dominant stems are fused together. The roots to the south side of the stem are damaging the adjacent tarmac footpath.	Monitor annually.	GOOD	FAIR	MOD	10-20	C
T 5	Mature Horse Chestnut <i>Aesculus hippocastanum</i>	16	1	1 E	85#	6#	7#	8#	Situated on adjacent land. Overhanging the public highway and footpath. Twin-stemmed at 3m with a balanced crown. Occasional pruning wounds. No major visible defects. Not fully inspected due to limited access.	No action required.	GOOD	GOOD	HIGH	40+	B
T 6	Early-mature Cherry <i>Prunus sp.</i>	16	3	1 N	45#	7#	5#	6.5 5#	Situated on adjacent land. Overhanging the footpath. Multi-stemmed at 3m with a balanced crown. Occasional pruning wounds. No major visible defects. Not fully inspected due to Ivy and limited access.	No action required.	GOOD	GOOD	MOD	20-40	B
T 7	Early-mature Common Ash <i>Fraxinus excelsior</i>	15	2	2 E	52 & 46	4.2	6#	9.5 8#	Overhanging the footpath and adjacent sub-station. Twin-stemmed at ground level with an unbalanced crown. Occasional pruning wounds. Decay cavity noted on the lowest limb to the west. Moderate deadwood throughout. Possible weak union at the stem junction.	Crown clean. Monitor annually.	GOOD	FAIR	MOD	10-20	C
T 8	Early-mature Common Ash <i>Fraxinus excelsior</i>	16	7	5 E	67	4	10#	9.5 6.2	Overhanging the footpath. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. A large branch tear is present at 5m. Moderate deadwood noted throughout.	Crown clean. Monitor annually.	GOOD	GOOD	MOD	20-40	B
T 9	Early-mature Common Ash <i>Fraxinus excelsior</i>	16	8	8 n/a	45	4	8#	6 3.5	Overhanging the footpath. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. Decay cavity noted at 4.5m. Moderate deadwood throughout.	Crown clean.	GOOD	FAIR	MOD	10-20	C
T 10	Early-mature Sycamore <i>Acer pseudoplatanus</i>	14	1.2	1.2 E	65#	5	6#	7.1 3	Overhanging the footpath. Single-stemmed and vertical with an unbalanced crown. Occasional pruning wounds. No major visible defects. Large epicormic growths to base. Ivy prevented a detailed inspection.	Remove the epicormic growths at the base.	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			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
						N	W	E							
T 11	Early-mature Common Ash <i>Fraxinus excelsior</i>	14	7	7 n/a	19	2 2.5 1	4		Overhanging the footpath. Single-stemmed and leaning with an unbalanced crown. A tall slender tree of poor form with a limited long term future.	Remove on arboricultural grounds.	GOOD	POOR	LOW	<10	U
T 12	Early-mature Sycamore <i>Acer pseudoplatanus</i>	13	1	1 SE	46, 42, 40, 40 & 28	4.5 8# 3.8	8.5		Overhanging the footpath. Multi-stemmed at ground level with an unbalanced crown. Occasional pruning wounds. Multiple decay cavities at the base as well as poor unions at the stem junctions. Limited long term future.	Remove on arboricultural grounds.	FAIR	POOR	LOW	<10	U
T 13	Early-mature Sycamore <i>Acer pseudoplatanus</i>	14	0	0 E	34, 30 & 28	4 3.5 3.5	4.5		Overhanging the footpath. Multi-stemmed at ground level with a balanced crown. Occasional pruning wounds. Of poor form with weak unions at the base. Limited long term future. Ivy prevented a detailed inspection.	Remove on arboricultural grounds.	FAIR	POOR	LOW	<10	U
T 14	Early-mature Sycamore <i>Acer pseudoplatanus</i>	15	0	0 n/a	58# at base	3 4.5 7	5		Multi-stemmed at 0.5m with an unbalanced crown. No evidence of significant pruning. Of poor form with crossing branches. Ivy prevented a detailed inspection.	Remove to facilitate the proposals.	GOOD	FAIR	LOW	10-20	C
T 15	Early-mature Sycamore <i>Acer pseudoplatanus</i>	15	0	0 E	45#, 40# & 40#	5 5.5 3	5.5		Multi-stemmed at ground level with an unbalanced crown. No evidence of significant pruning. Of poor form with a dirt pocket present at the stem junction. Ivy prevented a detailed inspection.	Remove to facilitate the proposals.	GOOD	FAIR	LOW	10-20	C
G 16	Young to semi-mature Mixed	To 11	0	0 n/a	To 25#	See plan			Overhanging the footpath. Sycamore (x4) and Elder (x1) of poor leaning form. Limited long term future. Ivy prevented a detailed inspection.	No action required.	GOOD	FAIR	LOW	10-20	C
T 17	Early-mature Common Ash <i>Fraxinus excelsior</i>	17	1.8	1.8 E	47	7 3 7	8		Overhanging the footpath. Single-stemmed and leaning with an unbalanced crown. Occasional pruning wounds. Of poor form with moderate deadwood throughout. The buttresses have grown large to the western side of the stem; likely to counteract the lean of the tree to the east	Crown clean. Monitor annually.	GOOD	FAIR	LOW	10-20	C
G 18	Young to semi-mature Mixed	To 9	0	0 n/a	To 20	See plan			Overhanging the footpath. Sycamore (x2), Common Ash (x1) and Elm (x1) of poor leaning form. Limited long term future. Ivy prevented a detailed inspection.	Remove to facilitate the proposals.	GOOD	FAIR	LOW	10-20	C
T 19	Early-mature Sycamore <i>Acer pseudoplatanus</i>	16	5	5 E	58#	3 3# 5.5	6.2		Overhanging the footpath. Single-stemmed and vertical with an unbalanced crown. Occasional pruning wounds due to crown lifting. Ivy prevented a detailed inspection.	No action required.	GOOD	GOOD	LOW	20-40	C
T 20	Early-mature Sycamore <i>Acer pseudoplatanus</i>	13	5	5 n/a	30#	2 4# 2	3		Overhanging the footpath. Single-stemmed and vertical with an unbalanced crown. No evidence of significant pruning. Tall slender tree of poor form. Limited long term future.	Remove to facilitate the proposals.	GOOD	GOOD	LOW	10-20	C

Tree Ref.	Age Species <i>Latin Name</i>	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
						N	W	E							
T 21	Early-mature Common Ash <i>Fraxinus excelsior</i>	15	6	6 n/a	30#	3.5# 3# 0		3	Single-stemmed and leaning with an unbalanced crown. Tall slender form with a limited long term future. Ivy prevented a detailed inspection.	Remove to facilitate the proposals.	GOOD	GOOD	LOW	10-20	C
T 22	Early-mature Common Ash <i>Fraxinus excelsior</i>	14	1	1 E	31	4 0 3		5.4	Single-stemmed and leaning with an unbalanced crown. No evidence of significant pruning. Poor form. Ivy prevented a detailed inspection.	Remove to facilitate the proposals.	GOOD	GOOD	LOW	10-20	C
T 23	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	9	2.5	2.5 NE	11	3 0 1		3.5	Single-stemmed and leaning with an unbalanced crown. No evidence of significant pruning. An insignificant tree of poor form.	Remove to facilitate the proposals.	GOOD	FAIR	LOW	10-20	C
T 24	Early-mature Common Ash <i>Fraxinus excelsior</i>	14	3	3 E	54 at base	7 4# 6		6	Overhanging the footpath. Multi-stemmed at ground level with an unbalanced crown. Occasional pruning wounds due to crown lifting. The three co-dominant stems are long and heavy over the footpath. Limited long term future.	Remove to facilitate the proposals.	GOOD	FAIR	LOW	10-20	C
T 25	Mature Beech <i>Fagus sylvatica</i>	19	0	0 E	95#	4# 11# 10#		13#	Multi-stemmed at 2m with a balanced crown. No evidence of significant pruning. No major visible defects. Not fully inspected due to limited access.	Crown lift the eastern section of the canopy to 5m, to facilitate the proposals.	GOOD	GOOD	MOD	40+	B
G 26	Semi-mature to mature Mixed	To 17	0	0 n/a	To 95#	See plan			Situated on adjacent land but overhanging the potential development area. Common Ash, Sycamore, Hawthorn, Beech, Elder and Holly of reasonable form. Not fully inspected due to limited access.	Remove to facilitate the proposals.	GOOD	GOOD	MOD	20-40	B
T 27	Early-mature Sycamore <i>Acer pseudoplatanus</i>	13	0	0 S	55	4 5.7 5		5	Multi-stemmed at 2.5m with a balanced crown. Occasional pruning wounds due to crown lifting. No major visible defects. Crossing and fused branches noted. However, these appear to be in a good condition.	Remove to facilitate the proposals.	GOOD	GOOD	MOD	20-40	B
T 28	Early-mature English Oak <i>Quercus robur</i>	13	0	0 n/a	86 at base	8 8.2 4		6.5	Twin-stemmed at 0.5m with an unbalanced crown. Occasional pruning wounds. No major visible defects. The lowest limb to the north is broken at the branch collar and is still attached to the stem. Minor deadwood noted throughout.	Remove to facilitate the proposals.	GOOD	GOOD	MOD	20-40	B
W 29	Young to mature Mixed	To 18	0	0 n/a	To 80#	See plan			Woodland belt of good value containing English Oak, Common Ash, Sycamore, Hawthorn, Beech, Elder and Holly whose form is typical of the woodland setting. Not fully inspected for the purposes of this report as individual trees within the group were not itemised on the topographical survey provided. However, deadwood, decay cavities, broken branches, poor unions and branch tears were amongst the occasional defects noted. The locations of the itemised trees on the attached plan are indicative.	The selective pruning of individual trees is required to facilitate the proposals. Please refer to <b>Section 2.1.2</b> in the accompanying Arboricultural Method Statement (JCA Ref: 11854JC/TT - Rev 1) for further details.	GOOD	GOOD	MOD	40+	A
T 30	Semi-mature English Oak <i>Quercus robur</i>	8	0	0 S	29	0 4 4.2		4.5	Multi-stemmed at 1.5m with an unbalanced crown. No evidence of significant pruning. No major visible defects.	Remove to facilitate the proposals.	GOOD	GOOD	LOW	20-40	C

Tree Ref.	Age Species <i>Latin Name</i>	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
						N	W	E							
T 31	Young English Oak <i>Quercus robur</i>	6	0	0 n/a	14	1.5	1.5	1.5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects.	Remove to facilitate the proposals.	GOOD	GOOD	LOW	20-40	C
T 32	Early-mature English Oak <i>Quercus robur</i>	14	4	4 S	53	4.5	4	5 6.5	Twin-stemmed at 3.5m with a balanced crown. Occasional pruning wounds due to crown lifting. No major visible defects. Minor deadwood noted.	Remove to facilitate the proposals.	GOOD	GOOD	MOD	20-40	B
T 33	Early-mature English Oak <i>Quercus robur</i>	14	5	5 S	49	2.5	4	5 6.3	Multi-stemmed at 3m with an unbalanced crown. Occasional pruning wounds due to crown lifting. Poor overall form.	Remove to facilitate the proposals.	GOOD	GOOD	MOD	20-40	C
T 34	Early-mature English Oak <i>Quercus robur</i>	13	4	4 W	46	5	6	7 5	Single-stemmed and vertical with a balanced yet sparse crown. Occasional pruning wounds due to crown lifting. Moderate deadwood noted.	Remove to facilitate the proposals.	FAIR	GOOD	MOD	20-40	C
T 35	Mature Sycamore <i>Acer pseudoplatanus</i>	17	2	2 S	57#	5.5	4.5	5.5# 6.5	Multi-stemmed at 2.5m with a balanced crown. No evidence of significant pruning. Tight union noted at the stem junction. Ivy prevented a detailed inspection. Not itemised individually on the topographical survey provided, as such, the location of the tree has been estimated on the attached plan.	Monitor annually.	GOOD	GOOD	MOD	20-40	B
H 36	Semi-mature Leylandii <i>X Cupressocyparis leylandii</i>	To 11	0	0 n/a	To 13#	See plan			Situated on adjacent land. A garden boundary hedge. No major visible defects.	Remove individuals at the southern end to facilitate the proposals (as detailed on the Tree Protection Plan).	GOOD	GOOD	LOW	20-40	C
G 37	Early-mature Common Lime <i>Tilia x europaea</i>	To 17	2	2 n/a	To 52#	See plan			Situated on adjacent land. A line of twelve trees of good upright form. Not itemised individually on the topographical survey provided, as such, the locations of tree stems have been estimated on the attached plan. Not fully inspected due to limited access.	Crown lift the canopies to 4m on the northern aspect to facilitate the proposals.	GOOD	GOOD	MOD	40+	B
G 38	Early-mature Mixed	To 17	2.5	2.5 n/a	To 60#	See plan			Situated on adjacent land. Sycamore (x2), Common Ash (x1) and Lombardy Poplar (x1) of reasonable form. Not itemised individually on the topographical survey provided, as such, the location of tree stems has been estimated on the attached plan. Not fully inspected due to limited access.	Crown lift/reduce the canopies on the western aspect to facilitate the proposals.	GOOD	GOOD	MOD	40+	B
T 39	Early-mature English Oak <i>Quercus robur</i>	13	3	3 n/a	40	5.3	4.5	4.5 3.5	Single-stemmed and vertical with a balanced crown. No evidence of significant pruning. No major visible defects. Minor bark wound noted at 1.8m. This tree has a good upright form, however, T40, which is growing 1m away from its base, is likely to suppress the full potential of this tree becoming an attractive specimen.	Remove to facilitate the proposals.	GOOD	GOOD	MOD	40+	B
T 40	Early-mature English Oak <i>Quercus robur</i>	10	0.5	0.5 n/a	68	6.5	9	8 10	Twin-stemmed at 2m with an unbalanced crown. Occasional pruning wounds. Of a poor form and growing 1m away from the base of T39 and therefore suppressing the adjacent tree from reaching its full potential.	Remove on arboricultural grounds.	GOOD	FAIR	MOD	20-40	U

Tree Ref.	Age Species <i>Latin Name</i>	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
						N	W	E							
T 41	Early-mature English Oak <i>Quercus robur</i>	9	0.5	0.5 W	49	5.5 6 5.9		5.4	Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects. Minor pruning stubs to the lower stem as well as minor deadwood noted.	Crown clean. Crown lift to 3m to provide clearance above the new footpath.	GOOD	GOOD	MOD	40+	B
T 42	Early-mature English Oak <i>Quercus robur</i>	10	4	4 n/a	71	7 7 6.5		7.5	Twin-stemmed at 2m with a balanced crown. Occasional pruning wounds due to crown lifting. Minor deadwood noted. No major visible defects.	Crown clean.	GOOD	GOOD	MOD	40+	B
T 43	Early-mature English Oak <i>Quercus robur</i>	11	3	3 W	52	6 7 2.5		5.2	Single-stemmed and vertical with an unbalanced crown. Occasional pruning wounds due to crown lifting. Minor deadwood noted. No major visible defects.	Crown clean.	GOOD	GOOD	MOD	40+	B
T 44	Early-mature English Oak <i>Quercus robur</i>	10	1	1 S	51	2 6 6		6	Single-stemmed and vertical with an unbalanced crown. Occasional pruning wounds due to crown lifting. Minor deadwood noted. Large pruning wound at the base. No major visible defects.	Crown clean.	GOOD	GOOD	MOD	40+	B
T 45	Early-mature Turkey Oak <i>Quercus cerris</i>	15	6	0 48 & 46 E		7# 1 4#		6#	Twin-stemmed at ground level with an unbalanced crown. No evidence of significant pruning. Unbalanced and of poor form following the removal of an adjacent tree.	Remove to facilitate the proposals.	GOOD	FAIR	MOD	10-20	C
T 46	Early-mature Sycamore <i>Acer pseudoplatanus</i>	14	2	2 n/a	70#	7# 5# 5#		5#	Twin-stemmed at 1m with a balanced crown. A dead tree overhanging a private residential garden.	Remove on arboricultural grounds.	DEAD	DEAD	DEAD	<10	U
T 47	Early-mature Sycamore <i>Acer pseudoplatanus</i>	14	0	0 n/a	65#	4.5# 6# 4#		5#	Twin-stemmed at 5m with a balanced crown. No evidence of significant pruning. No major visible defects. Not fully inspected due to dense vegetation.	No action required.	GOOD	GOOD	MOD	20-40	B
T 48	Early-mature Common Ash <i>Fraxinus excelsior</i>	13	1	1 S	55#	2# 3# 4#		3#	Single-stemmed and vertical with a balanced crown. Topped at 5m with decay noted at the former topping points. Not fully inspected due to dense vegetation.	Monitor annually.	FAIR	POOR	LOW	10-20	C

## 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 - See Figure 1.

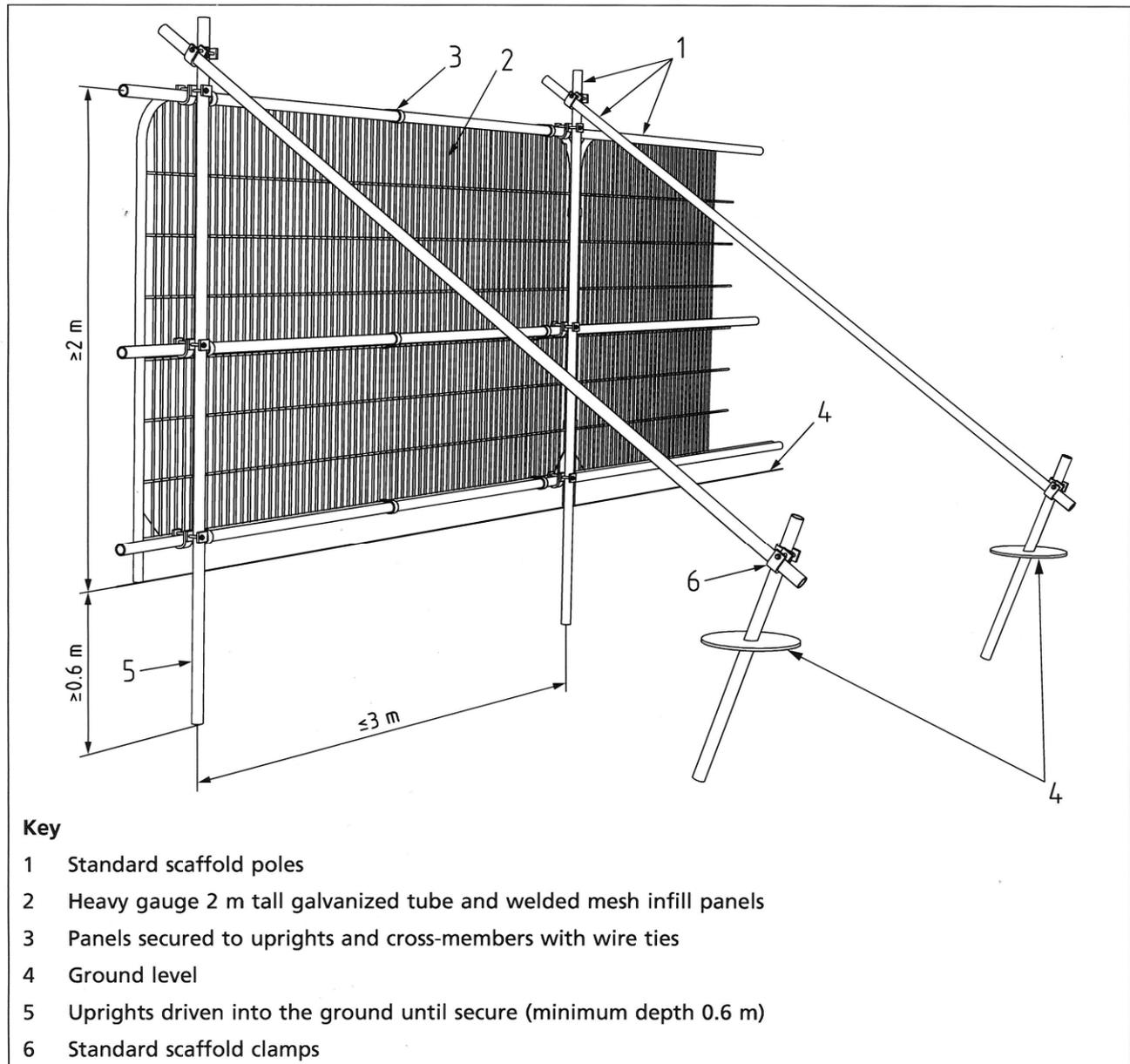


Figure 1: 'Protective Barrier to BS 5837: 2012'. To be used where situated in open ground.

# 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

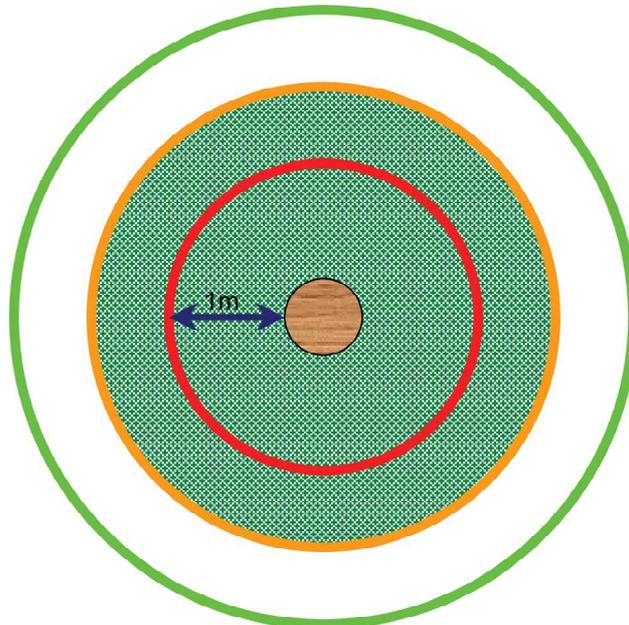
01422 376 335

## Appendix 3: Utilities and Drainage

- A3.1 Over-ground services should 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 (see Figure 2). 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.

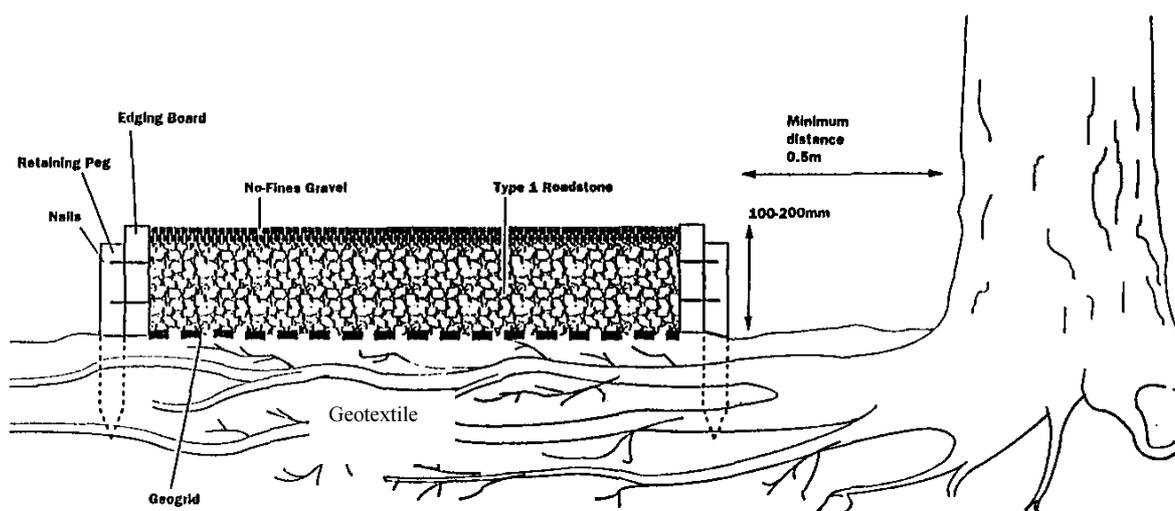
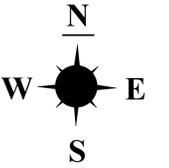
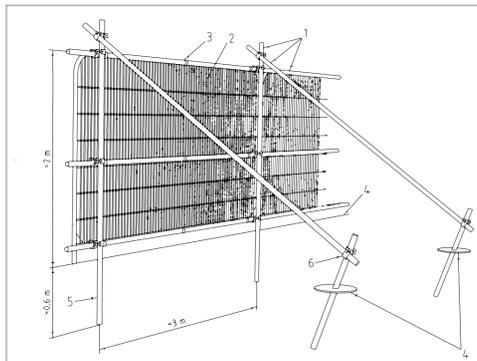


Figure 2. A light duty drive constructed using the *No Dig Method*.

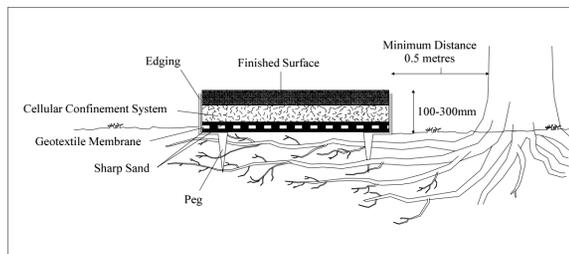


**Default specification for a protective barrier**

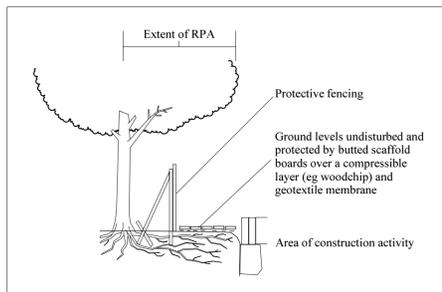


- Key**
1. Standard scaffold poles
  2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
  3. Panels secured to uprights and cross-members with wire ties
  4. Ground level
  5. Uprights driven into the ground until secure (minimum depth 0.6m)
  6. Standard scaffold clamps

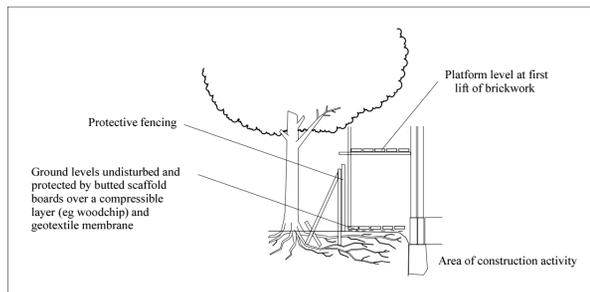
**An example of a 'no dig' road construction**



**An example of a walkway within the RPA**



**An example of scaffolding within the RPA**



- NOTES**
- THE DRAWING IS BASED ON SURVEY DRAWING HD/1341/1 PREPARED BY [REDACTED] AND OPERATIONAL SAFETY INFORMATION. IT IS SUBJECT TO CORRECTIONS OF SURVEYABLE FEATURES OF ANY EARTHWORK AND CONSULTATION WITH THE LOCAL AUTHORITY, COAST GUARD AND PUBLIC UTILITIES ETC.
- BOUNDARY & FENCE TYPES**
- 1800mm HIGH CLOSE WALL WITH FEATURE TIES AND CLOSE SCHEDULED TOWER WALL PANELS
  - 1800mm HIGH TAMBUR CLOSE SCHEDULED FENCE
  - 1200mm HIGH RAILINGS
  - 1000mm HIGH TAMBUR POST & RAIL FENCE
  - 800mm HIGH TAMBUR POST & RAIL KNEE FENCE
  - GATE POSTS / PILES
  - BOUNDARY
  - EXISTING SEWER & EARTHWORK
  - GAS/STAIN RETENTION WALLS
- EXISTING BUILDINGS**
- EXISTING BUILDINGS TO BE DEMOLISHED (MARKED TO ROAD PAVEMENT / FOOTPATH AND DRIVE) - UNDER REMOVAL PHASE
  - TURFED AREAS - ALL NEW GRASS TO BE LAYED
  - PARKING SLABS TO PAVING & FENCE
  - LOW FENCE SLABS TO INCLUDE SPECIES SUCH AS BOX, COTONEASTER, FUCHSIA, SPERBERG & HAWTHORN. OPERATED WITH UNDER FENCE PAINTING/BLACK POLYURETHANE CHERRY COLOUR & HOPE - RESISTANCE TO GRASS/WEEDS/SHRUBS
  - HOUSE TYPES CONTAINING BATHROOMS
- GENERAL KEY**
- PEDESTRIAN & VEHICULAR ENTRANCES
  - GATE
  - SOIL WASHOUT TO HABITABLE ROOMS (LIVING, DINING, KITCHEN, BEDROOM, ETC.)

**Appendix 5: Tree Protection Plan**

ADDRESS: Clayton Fields, Huddersfield, HD2 2AF.  
JCA REF: 11854e/JC/TT - Rev 1

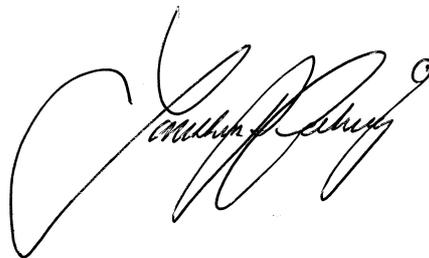
SCALE: 1:1000 PAPER SIZE: A1

	CANOPY OF TREE TO BE RETAINED
	CANOPY OF TREE TO BE REMOVED
	STEM OF TREE TO BE RETAINED
	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA (RPA)
	AREA OF RPA NOT ENCLOSED BY THE TEMPORARY PROTECTIVE FENCING; GROUND PROTECTION REQUIRED
	AREA OF RPA ENCROACHED BY THE DEVELOPMENT; SPECIALIST CONSTRUCTION METHODS AND MATERIALS ARE TO BE USED TO MINIMISE ROOT DISTURBANCE. GROUND PROTECTION REQUIRED PRIOR TO THIS.
	PROTECTIVE FENCE LINE (CEZ) PHASE 1
	PROTECTIVE FENCE LINE (CEZ) PHASE 2 (Trees T7 and T8)



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



.....

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB.  
MICFor.*

10<sup>th</sup> April 2017

For and on behalf of *JCA Ltd*

**Registered Office:**

**Unit 80  
Bowers Mill  
Branch Road  
Barkisland  
Halifax  
HX4 OAD**

**Tel. 01422 376335  
Fax. 01422 376232  
Email: [jon@jcaac.com](mailto:jon@jcaac.com)**

**[www.jcaac.com](http://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)

---

#### Advice for Engineers, Loss Adjusters and Insurers

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

---

#### Advice for Local Authorities and Social Housing

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

---

#### Tree Advice for the Legal Profession

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

---

#### Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

---

#### Tree Health and Pest and Disease Management

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

---

### ECOLOGICAL SERVICES

---

#### Ecological Pre-Planning Services

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

---

#### Ecological Post-Planning Services

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

---

#### HEAD QUARTERS:

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

Tel: 01422 376335  
Mobile: 07778 391986  
Email: [jon@jcaac.com](mailto:jon@jcaac.com)  
Website: [www.jcaac.com](http://www.jcaac.com)

