ARBORICULTURAL METHOD STATEMENT
to BS 5837:2012
at
Heaton Avenue First School
Cleckheaton
West Yorkshire
BD19 3AE

Client:
Planned Contracts Ltd

Client Address:
Essential Business Park
Field Head Road
Birstall
WF17 9BN

Client Telephone:
0845 344 2668

JCA Ref:
12832b/SR

JCA Limited
Arboricultural & Ecological Consultants

Contents

1. Introduction

1.1 Purpose of the Method Statement

1.1.1 This Arboricultural Method Statement has been prepared to ensure good practice in the protection of retained trees during the development at **Heaton Avenue First School**.

1.2 Terms of Reference

1.2.1 JCA Limited is instructed by **Planned Contracts Ltd** to prepare an Arboricultural Method Statement for the proposed development, based on our arboricultural report dated 11th May 2016 (JCA Ref: **12832/SR**). 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 18 new residential properties, with associated parking and garden space.

1.2.3 The following drawings have been provided and these are the basis of the Arboricultural Method Statement and the Tree Protection Plan at **Appendix 3**:

- Topographical Survey (Drawing Ref/No. **SSS-6750 Rev A**).
- Development Layout (Drawing No. **2587-01-04C**).

1.3 Status of the Method Statement

1.3.1 This Arboricultural Method Statement should be included as part of the specification and schedule of works issued to the building contractor, and can form part of the contract.

1.3.2 This Arboricultural Method Statement should be available on site for inspection by the local authority, contractors and other relevant persons.

2. Tree Works Prior, During and Post Construction

2.1 Tree Works Prior to Construction

2.1.1 Prior to any construction activity, the first operation on site will be the undertaking of the necessary arboricultural works, as described at **Appendix 1**. In some cases, tree works are required during the construction phase, and these are detailed in **Section 2.2**.

2.1.2 The tree works include:

- The removal of **T2, T3, T4, H5, T6, T15** and **G20**, to facilitate the proposed development.
- The pruning of **T16** for arboricultural reasons.
- The pruning of **H1**, to facilitate the development.
- The exploratory excavation and potential root pruning of **T7, T8, T9, T10, T11, T12, T13, T16, T17, T18** and **T19** to facilitate the development.

2.2 Tree Works During Construction

2.2.1 As part of the proposed development, some driveways, parking spaces and footpaths incur the RPA of retained trees. This is relevant to **T7, T8, T9, T10, T11, T12, T13, T16, T17, T18** and **T19**. Due to levels differences and the need to match the proposed surfaces to those within the existing street, 'no-dig' designs are not possible. Following consultation with the LPA on this matter, the proposed strategy for this will be as follows:

2.2.2 The existing hard surfacing in these areas will be sensitively broken out and removed, in accordance with **Section 4**, to expose the underlying soil. Hand excavation will then be undertaken down to the minimum depth required to accommodate standard driveway/footpath construction, and to a maximum depth of 1000mm, whichever is shallower. Care will be taken to retain any roots present within the excavated area.

2.2.3 The supervising arboriculturalist will then make a decision as to whether the exposed roots can be pruned back without affecting the long term health of the trees. If so, they will be cleanly severed using appropriate hand tools (e.g. sanitised hand saws or bypass secateurs). If it is considered that the removal of the roots required to accommodate the new surfaces will likely lead to the death of the adjacent trees, the supervising arboriculturalist will contact the LPA Tree Officer to agree a way forward. Providing that both parties agree on the impact to the trees, it may be that additional trees require removal and in this case the Tree Officer and supervising arboriculturalist will liaise to ensure adequate mitigation and replacement of this loss.

2.2.4 An underground air raid shelter is known to be present beneath plots 3 and 4, within the RPAs of **T8** and **T9**. The exact extent of this structure is not known, although the approximate dimensions are shown on the **Tree Protection Plan** at **Appendix 3**. An exploratory operation is needed so that this structure can be opened-up and filled with suitable aggregates to stabilise it. This operation incurs the RPAs of **T8** and **T9**. This operation will be undertaken in the same manner as for the driveways detailed above in **Sections 2.2.1-3**. Where the structure incurs the RPAs of **T8** and **T9** arboricultrual supervision will be undertaken with root pruning, where deemed appropriate by the supervising arboriculturalist. If the long term health of these trees is considered in danger, the LPA Tree Officer will be contacted as per the above.

2.3 Tree Works Post Construction

2.3.1 When the construction phase is complete and when the temporary 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 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 the very first job to be undertaken on site following the completion of the tree works (**Section 2.1**). This barrier will comprise of protective fencing and ground protection, 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 3**. 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 weld mesh panel fencing, situated in rubber or concrete feet. Panels will be joined together using a minimum of two anti-tamper couplers, positioned so that they can only be removed from inside the barrier. The fencing will be supported at each joint (where two panels meet) with a stabiliser strut, attached to the fencing at one end and a block tray at the other. Please refer to **Appendix 2 (Fig 2)** 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 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**.

3.2 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 Where only pedestrian traffic and light machinery is required to pass over the RPA (no more than 2 tonnes in weight), a porous, thin geotextile membrane will be laid over the exposed area. A layer of sharp sand or woodchip, no less than 150mm in depth will be evenly spread over the geotextile and **must not** be compacted by mechanical means. Scaffold boards will then placed on top of this. This is relevant to **T8, T9, T12, T13, T16, T17** and **T18**.

3.3 Protective Barrier During Construction

3.3.1 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.

3.3.2 It is noted that existing hard surfaces within the CEZ that have been fenced-off are to remain in place during the construction phase. Only once the fencing has been removed and the landscaping phase commences, may the hard surfacing be removed (in accordance with **Section 4**).

3.4 Removal of the Protective Barrier

3.4.1 When the main 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 It is proposed to remove existing hard surfaces within the RPA of **T7, T8, T9, T10, T11, T12, T13, T16, T17, T18** and **T19.** This operation will be supervised by the appointed arboriculturalist throughout. Where hard surfaces are located within fenced-off areas within the CEZ (proposed to be open garden space), this operation will commence after the main site machinery has left and the fencing removed, as stated in **Section 3.4**. In the case of exploring and filling the air raid shelter and accommodating new driveways and paths within RPAs, this operation will be undertaken during the construction phase.

4.1.2 For this method, the top layer of the surfacing will first be broken by mechanical means. This may be achieved by the use of a hand-held breaker or an excavator mounted breaker (also known as a jackhammer or demolition hammer). For excavator mounted breakers, movement of the plant is only permitted on the existing, unbroken surfacing, where within the RPA of adjacent trees. In order to achieve this, the works will be undertaken from the closest point of the surfacing to the tree, working backwards.

4.1.3 When breaking the surfacing, care will be undertaken to only break the surface and not to disturb the underlying soil. Once the surfacing has been broken into manageable sizes, it will be carefully removed from the area by hand. Alternatively, if the appointed arboriculturalist deems it appropriate, the rubble may be removed using a bucket mounted excavator, under supervision. Construction dumpers may be used to transport the rubble away from the area, providing they are located outside of the exposed RPA at all times.

4.1.4 In areas for proposed new drives/paths, exploratory excavation/root pruning will be undertaken next, followed by installation of the new surfacing. In areas that are proposed to be new garden spaces, suitable top soil will be imported and spread over the areas by hand, not exceeding the previous ground levels.

4.1.5 These operations are to be supervised by a suitably qualified arboriculturalist throughout.

4.2 Ground Level Changes

4.2.1 With the exception of exploratory excavations, root pruning and new surfaces discussed earlier in this report, no ground level changes are permitted within the RPA without prior permission from JCA and the Local Planning Authority.

4.3 Construction of Hard Surfaces

4.3.1 As discussed previously, the need to match the levels of proposed hard surfacing with those within the existing street mean that 'no-dig' solutions are not feasible. Therefore, following the exploratory excavations and root pruning discussed previously, new hard surfaces will be of standard construction detail. No further mitigation actions are considered necessary.

4.4 Construction of New Buildings

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

4.5 Excavations and Services

4.5.1 Following the exploratory excavation and root pruning discussed in **Sections 2.2** and **4.1**, no further mitigation actions are needed to accommodate proposed utility routes.

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*.

5.1.3 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 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 boundary fences and railings with small, intermittent concrete bases. Where these are located within the RPA of retained trees, these bases will be dug out by hand and they are to be as small as practically possible.

5.3 Mycorrhizal Fungi Inoculation

5.3.1 As the proposed development will encroach into the RPA of **T7, T8, T9, T10, T11, T12, T13, T16, T17, T18** and **T19** possibly resulting in some root loss, the application of *Mycorrhizal fungi* will be undertaken to the soils of the new garden spaces around these trees after the construction phase is complete.

5.3.2 *Mycorrhizae* fungi form a symbiotic relationship with tree roots; a tree root associated with *Mycorrhiza* takes up nutrients more effectively than a non associated root. An application of *Mycorrhizae* will therefore be beneficial for these trees.

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 temporary protective fencing around the trees (as detailed at **Appendix 2** and as shown on the Tree Protection Plan at **Appendix 3**).		
Stage 4	Install ground protection within the RPAs of those trees which are not fully protected by the fencing (as detailed in **Section 4**).		
Stage 5	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.		
Stage 6	Undertake the demolition of the existing hard surfaces and the filling of the air raid shelter (as detailed in **Section 4**). Undertake exploratory excavation under supervision by an arboriculturalist with root pruning where deemed acceptable.		
Stage 7	Construction Phase: Undertake the construction of the new buildings and install new hard surfacing.		
Stage 8	Following the completion of the construction phase and when all site traffic and machinery has left, the protective fencing and ground protection can be removed.		
Stage 9	Remove final sections of hard standing previously cordoned off by protective fencing and re-instate with top soil back to original levels.		
Stage 10	Post construction remedial tree works to be undertaken including *Mycorrhizal* inoculation within new garden spaces.		

7. Relevant Contact Details

Contact Name	Organisation/Detail	Contact Number
Scott Reid	JCA Limited	01422 376335
Nick Goddard	Tree Officer	01484 414909
Site Manager	TBC	TBC
Chris Finn	Architect	01757 268650

Appendices

Appendix 1: Tree Works Schedule

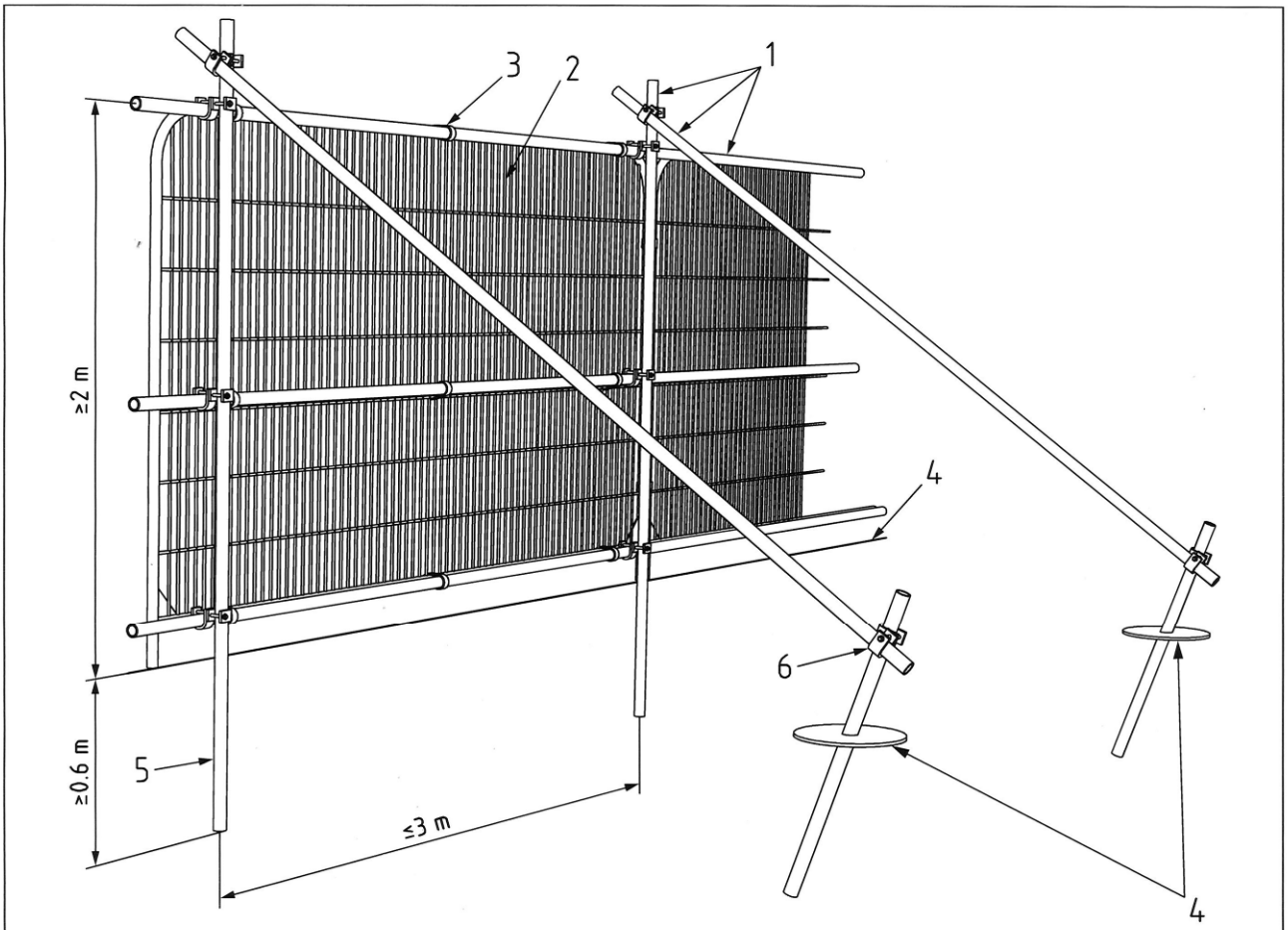
Tree Ref.	Age Common Name *Botanical Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
H 1	Young Group *Details in observations*	3	0	0 n/a	5	See plan	Off-site boundary hedgerow offering some screening but easily replaceable and therefore of limited arboricultural value. Species includes Leylandii, Privet and Sycamore.	Face back where overlapping proposed parking space to plot 3. n/a	GOOD	GOOD	LOW	HIGH	10+	C 1
T 2	Semi-mature Purple Crab *Malus purpurea*	4	2	2 W	13	2 2 2 2	Small amenity tree; single-stemmed and slightly leaning with a balanced crown. Suckering at base. No major visible defects.	Remove to provide adequate space for construction. n/a	GOOD	GOOD	LOW	MOD	10+	C 1
T 3	Early-mature False Acacia *Robinia pseudoacacia*	14	4	3 E	43	6 2 8 5.5	Single-stemmed and leaning specimen (to the east) due to competition. Occasional pruning wounds due to crown lifting, including a large one at 2m on the main stem (occluding well). Minor deadwood noted. Minor bark wounding at base. It is in acceptable condition at this time.	Remove to facilitate construction. n/a	GOOD	GOOD	MOD	MOD	20+	B 1
T 4	Early-mature Norway Maple *Acer platanoides*	12	4	4 S	42	6 5.5 6 6	A well established specimen, multiple-stemmed from 2.5m with a balanced crown. Occasional pruning wounds due to crown lifting. Canopy is growing close to adjacent building and utility cables to the north and west respectively but no work is required at this time.	Remove to facilitate construction. n/a	GOOD	GOOD	MOD	MOD	20+	B 1
H 5	Semi-mature Privet *Ligustrum ovalifolium*	1.5	0	0 n/a	3	See plan	Small section of well maintained boudary hedgerow in good condition.	Remove to facilitate construction. n/a	GOOD	GOOD	LOW	NO DATA	10+	C 1
T 6	Early-mature Silver Birch *Betula pendula*	12	3	3.5 N	37	7 5 4 2.5	Street tree; single-stemmed with a fairly balanced crown although slightly suppressed to the south. Minor epicormic growth on stem. Minor bark wound at base, minor decay pocket at 2m. No major visible defects.	Remove to facilitate construction. n/a	GOOD	GOOD	HIGH	LOW	20+	B 1
T 7	Early-mature Common Lime *Tilia europaea*	16	5	5 N	50	5 4.5 4.5 5	Multiple-stemmed street tree (from 2.5m) with a balanced crown. Previously topped and crown lifted, with epicormic growth on main stems and at base. Utility cables pass through crown.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 8	Early-mature Common Lime *Tilia europaea*	16	5	2.5 W	49	3 4.5 4.5 4.5	Multiple-stemmed street tree (from 2m) with a balanced crown. Previously topped with epicormic growth on main stems and at base. Utility cables pass through crown. Occasional pruning wounds due to crown lifting.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1

Tree Ref.	Age Common Name *Botanical Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
T 9	Early-mature Common Lime *Tilia europaea*	12	5	2.5 W	36	3 3.5 4.5 5	Multiple-stemmed street tree from 3m with a balanced crown. Utility cable passes through crown. Epicormic growth on main stems and at base. Occluded logitudinal bark wound at base from 0.2-1.5m.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 10	Early-mature Common Lime *Tilia europaea*	16	5	2.5 N	42	3.5 3.5 6.5 5	Street tree; multiple-stemmed from 2.5m with a well established crown. Previously topped and crown lifted. Epicormic growth on main stems and at base. Utility cable passes through crown.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 11	Early-mature Common Lime *Tilia europaea*	16	5	3.5 S	44	4 4.5 5.5 4	Street tree; multiple-stemmed from 3m with a well established crown. Utility cable passes through crown. Epicormic growth on main stems and at base. Previously topped from 3m. Occasional pruning wounds due to crown lifting.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 12	Early-mature Common Lime *Tilia europaea*	16	4.5	3 n/a	50	4.5 5 6 5.5	Street tree; multiple-stemmed from 2.5m with a well established crown. Previously topped from 3m with epicormic growth on main stems and at base. Utility cable passes through crown. Occasional pruning wounds due to crown lifting.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 13	Early-mature Common Lime *Tilia europaea*	16	6	2.5 S	59	6 4.5 5 5	Street tree, previously topped from 3.5m. Multiple-stemmed from 2-3m with a well established crown. Significant bark wounding at base but this is occluding well. Epicormic growth on main stems. Occasional pruning wounds due to crown lifting.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 14	Early-mature Common Lime *Tilia europaea*	12	5	3 S	38	4 3.5 4 4.5	Street tree, Single-stemmed and vertical with a balanced crown. Previously topped from 3m. Epicormic growth on stems.	No action required. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 15	Semi-mature Purple Crab *Malus purpurea*	4	2	1.5 NW	9, 10	3 1.5 3.5 2.5	Small specimen, twin-stemmed from 1.2m with an asymmetric crown and vandalism damage at the main union point. In acceptable condition at this time.	Remove to facilitate construction. n/a	GOOD	GOOD	LOW	MOD	10+	C 1

Tree Ref.	Age Common Name *Botanical Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
T 16	Mature Sycamore *Acer pseudoplatanus*	15	4.5	5 N	57	6 5 5 6.5	A single-stemmed specimen with a balanced crown which is conflicting with adjacent utility cables. Multiple pruning wounds due to crown lifting which have now occluded. It is a prominent specimen with an unusually large amount of deadwood present which indicates decline, although the cause is not evident at present.	Prune back canopy from utility cables to provide a clearance of 1.5m. Remove all deadwood and Monitor further decline/recovery on a biennial basis (2 yearly). Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. Moderate	FAIR	FAIR	HIGH	MOD	20+	B 2
T 17	Early-mature Common Lime *Tilia europaea*	16	2.5	4 W	53	5.5 4.5 6 5	Prominent specimen, single-stemmed and vertical with a balanced crown. Occasional pruning wounds due to crown lifting and significant epicormic growth to main stem. No major visible defects.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 18	Mature Wild Cherry *Prunus avium*	11	2	2.5 NW	66	7 6.5 6.5 8	A grafted, flowering variety of Wild Cherry. It is a large and spreading specimen, multiple-stemmed from 1.7m. Stem unions appear to be acceptable. Occasional pruning wounds due to crown lifting. No major visible defects. Significant suckering at base.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
T 19	Early-mature Common Lime *Tilia europaea*	12	3.5	3 NW	50	6.5 5.5 7 6	Single-stemmed and vertical specimen with a balanced crown. Occasional pruning wounds due to crown lifting. Epicormic growth on main stem. No major visible defects.	Exploratory excavation to be undertaken, with arboricultural supervision and root pruning where needed. n/a	GOOD	GOOD	HIGH	MOD	20+	B 1
G 20	Semi-mature Group *Details in observations*	6.5	0	0 n/a	10	See plan	Scrubby group of dense self-set vegetation of little arboricultural value. Species includes Goat Willow, Horse Chestnut, Elder, Sycamore and Common Ash.	Remove to facilitate construction. n/a	FAIR	FAIR	LOW	HIGH	10+	C 1

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 and Figure 2.



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'. To be used where situated in open ground.

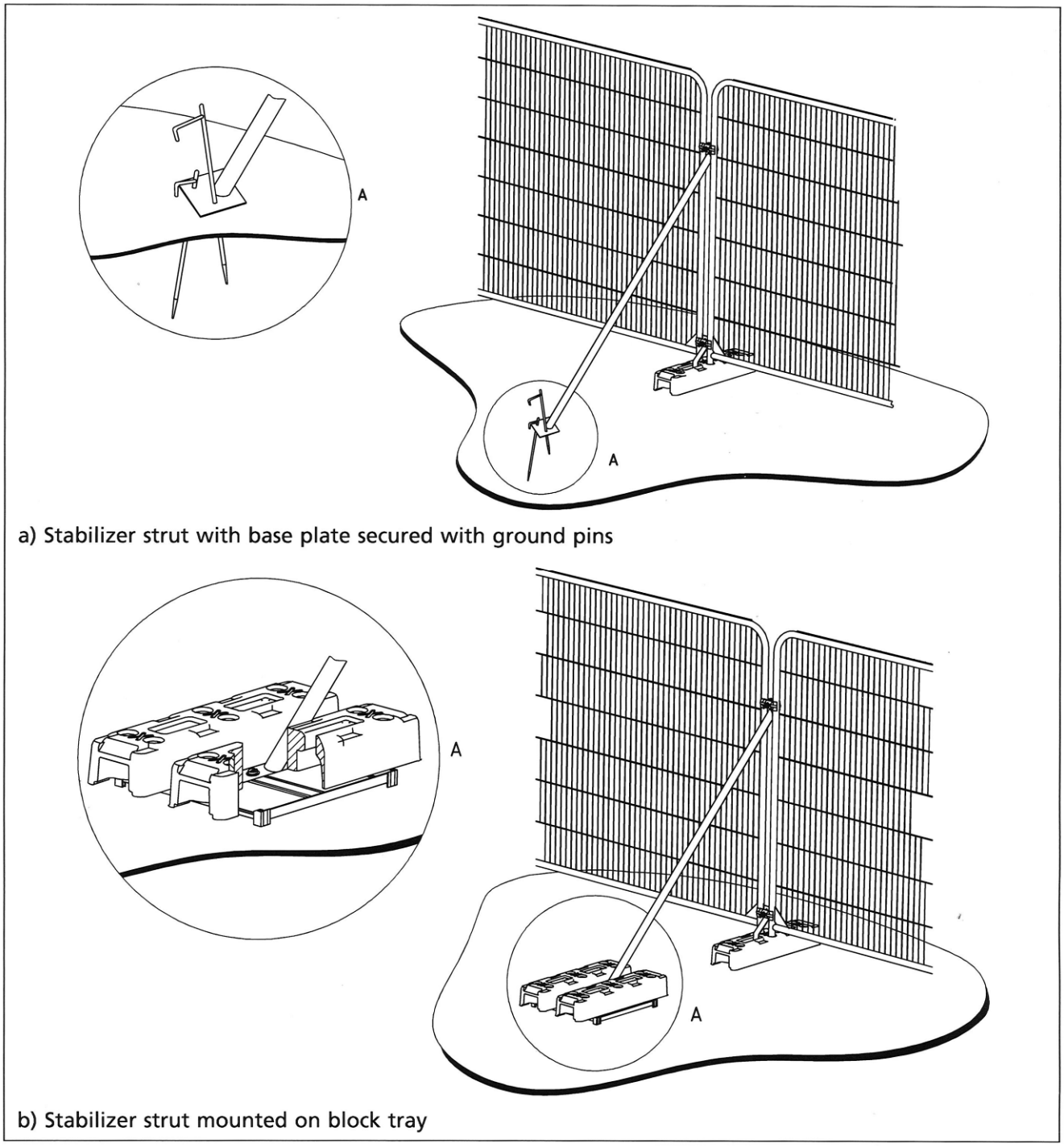


Figure 2: 'Examples of above-ground stabilisation systems'. To be used where there is hard surfacing which is to be retained.

The specific stabilisation method to be used is detailed in **Section 3**.

TREE PROTECTION ZONE

KEEP OUT!

TREES ENCLOSED BY THIS FENCE ARE PROTECTED
BY STRICT PLANNING CONDITIONS

ANY DAMAGE CAUSED TO THESE TREES MAY
RESULT IN **CRIMINAL PROSECUTION**

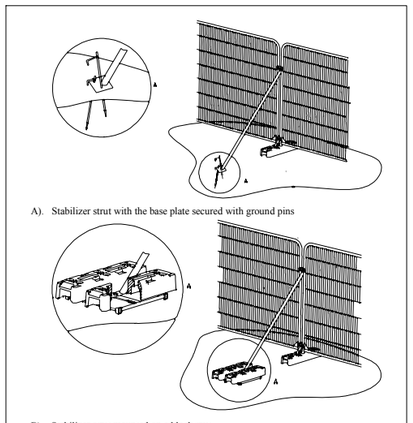
RESTRICTED AREA:

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

REPORT TREE DAMAGE TO JCA LIMITED ON
01422 376 335

Appendix 3: Tree Protection Plan

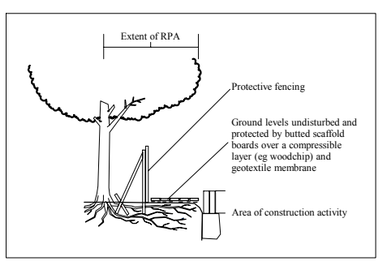
Examples of above-ground stabilizing systems



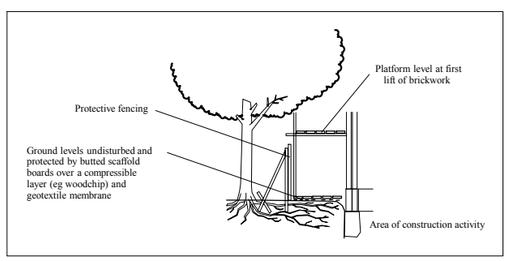
A). Stabilizer strut with the base plate secured with ground pins

B). Stabilizer strut mounted on a block tray

An example of a walkway within the RPA



An example of scaffolding within the RPA



Appendix 3: Tree Protection Plan

ADDRESS: Heaton Avenue First School, Cleckheaton, West Yorkshire, BD19 3AE.
JCA REF: 12832b/SR.

SCALE: 1:500	PAPER SIZE : A3

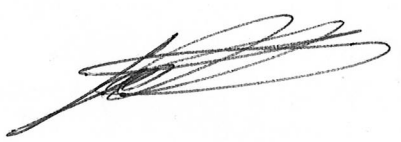
	TREE TO BE RETAINED
	TREE TO BE REMOVED
	STEM OF TREE TO BE RETAINED
	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA (RPA)
	AREA OF RPA NOT ENCLOSED BY THE TEMPORARY PROTECTIVE FENCING; GROUND PROTECTION REQUIRED
	AREA OF RPA ENCROACHED BY THE DEVELOPMENT; EXPLORATORY EXCAVATION UNDER ARBORICULTURAL SUPERVISION WITH ROOT PRUNING AS NEEDED.
	PROTECTIVE FENCE LINE (CEZ)
	PROPOSED NEW DEVELOPMENT

JCA Limited

Arboricultural & Forestry Consultants

I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed



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Scott Reid *ND (Arboriculture and Forestry)*.

29th September 2017

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

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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:

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