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arboricultural consultants

Location:
Doncaster Road,
Goldthorpe

Report Type:
Arboricultural Method Statement
inc. Impact Assessment

Ref:
ARB/CP/2046

Date:
December 2021

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Appendices

1 Introduction

1.1 This arboricultural method statement has been prepared by Charles Prowse of Elliott Consultancy Ltd at the request of the client. It will provide details regarding the retention and protection of trees during the proposed development at Doncaster Road, Goldthorpe.

1.2 **Scope of the report:**

- This method statement provides arboricultural information and advice in relation to the proposed alterations to the building and vehicle parking arrangements at Doncaster Road, Goldthorpe, as detailed within Appendix 3.
- It will outline any trees to be removed prior to development and those to be retained along with any pruning required. Also provided are details of all measures recommended for adequate tree protection including any special construction measures to be utilised.
- It should be used to guide the construction process in order to minimise potential damage to retained trees.
- It will detail, within the Arboricultural Tasks Sequence Table (Appendix 1), a timescale for implementation of these tree works and protective measures in reference to the development period.

1.4 **Prior to site works commencing, and in particular ground preparation, this Arboricultural Method Statement needs to passed to the site manager and used as reference during the development period, with particular attention paid Sections 5-7, and Appendices 1-8.**

2 Site Information

2.1 The area surveyed and the extent covered by this method statement is the site of the former Dearne Goldthorpe Primary School on the corner of Doncaster Road and High Street in Goldthorpe. Figure 1 shows the extent of the area.

Figure 1: Area Surveyed (highlighted)

Map data ©Google Imagery

2.2 The site was cleared of the school structures a number of years ago with only some areas of tarmac and concrete remaining. Rough grasses and scrub has established on the areas of soft ground.

2.3 The trees surveyed are primarily located along the site perimeter. Images on the internet reveal that additional trees had been present within the school grounds but have since been removed.

2.4 There are a small number of trees located upon adjacent property but which have an influence within the site; details of which are upon the Tree Protection Plan, Appendix 3.

3 Tree Category Evaluation

3.1 The criteria used for evaluating how suitable each tree is for retention within a development is that suggested within 5837:2012; a copy of the categorisation sheet can be found within Appendix 4.

3.2 BS5837:2012 notes that all trees apart from those with stem diameters <150mm or classified as Category U should be considered for retention and viewed as a potential site constraint. When inspected, each tree and or group feature is assigned one of four categories that signify how suitable that tree/group would be for retention within any development proposals, and therefore the degree to which it should constrain the site. The four categories are as follows:

3.2.1 **Category A** (coloured green) trees are those of high quality and value, and of a condition whereby they could make a substantial contribution to the site. The retention of Category A trees should be considered during the design phase and afforded adequate physical protection during the construction phase in accordance with BS 5837:2012 where retained. This means keeping proposed features and alterations to ground levels outside of root protection areas and crown spreads so as to ensure that the tree remains in an adequate condition post-development. Root protection areas and crown spreads are displayed upon the Tree Constraints Plan, Appendix 2. None of the trees were classified as Category A.

3.2.2 **Category B** (coloured blue) trees are those of moderate quality and value, and of a condition that they make a substantial contribution to the site. The retention of Category B trees should be considered during the design phase and afforded adequate physical protection during the construction phase in accordance with BS 5837:2012 where retained. Ten trees were classified as Category B; their numbers being 1, 3, 5-7, 9, 11, 19-21.

3.2.3 **Category C** (coloured grey) trees are considered to be of low quality and value, but of an adequate condition to remain in the short-term. Trees with a stem diameter of less than 150mm (measured at 1.5m above ground level) are classified as Category C; these trees should also be retained where possible but where they form a significant constraint to development their removal should be permitted. Where they are to be retained they should be afforded adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

Nine individual trees and four groups were classified as Category C, their numbers being Trees 2, 4, 8, 10, 12-14, 17, 18 and Groups 1-4.

3.2.4 **Category U** (coloured red) trees are of such a condition that any existing value would be lost within 10 years. As a result it is recommended that Category U trees are not considered a constraint for development and are removed prior to construction commencing. Two trees, numbers 15 and 16, were classified as Category U.

3.2.5 In addition to the four main categories explained above, each tree/group is assigned a sub-category which signifies its overriding value as determined by the surveyor, which is noted by adding a suffix of 1, 2 or 3 alongside the category letter. 1 signifies that the trees/groups main value is arboricultural e.g. it may be a particularly good example or may be rare. 2 signifies that the overriding factor was due to the landscape value that the tree/group provides e.g. it may be part of a group feature such as a screen. 3 indicates that a cultural factor was the overriding value e.g. it may have historical or commemorative importance.

Summary of Categories Awarded			
Category	Tree Numbers	Group Numbers	Hedgerow Numbers
A			
B	1, 3, 5-7, 9, 11, 19-21		
C	2, 4, 8, 10, 12-14, 17, 18	1-4	
U	15, 16		

3.3 The trees within the property are mostly of reasonable physiological and structural condition. Specific details for trees can be found within Appendix 2. A small number of the trees have been affected by proximity to former school buildings, in particular Trees 19-21, which are early-mature Ash. Historic images reveal that the buildings were less than 2000mm from the stems which is likely to have effected root growth.

4 Design Proposals Arboricultural Impact

4.1 This section concentrates on the proposed development and how it relates to the current tree population within the site. Any conflict issues between the proposed layout and existing trees are discussed and remedial options, where possible, suggested.

4.2 As displayed within Figure 2 it is proposed that a retail development with supporting infrastructure will be created within the site.

Figure 2: Proposed Layout

4.3 **Conflict 1: Loss of trees due to the proposed layout**.

As shown within Figure 2 the construction of the proposed layout will necessitate the removal of six individual trees.

Mitigation / Countermeasure: One of the trees requiring removal were classified as Category B; three trees as Category C and two trees as Category U. The remaining fifteen trees and four groups within the site can be retained. In arboricultural terms, the magnitude of impact from the tree removals is considered to be low.

4.4 **Conflict 2: Construction within root protection areas.**

The service yard access, some parking bays and access paths encroach within the root protections areas (RPA) of Trees 5, 7, 9 and 19.

Mitigation / Justification: The encroachments within the RPA of Trees 5 and 7 are deemed to be very minor and unlikely to detrimentally affect their condition. The service road encroachment for Tree 9 is greater but the school playground was situated where the service road will be and is currently hard surfaced, which may have affected root proliferation in that area. The former school building was approximately 2 metres from the stem of Tree 19 so it is likely that the roots spread in an east-west direction and therefore the access path to the south is unlikely to pose much of an issue.

4.4 **Conflict 3: Pruning trees to create clearance to structures.**

The canopy of Trees 9, 10, 12 17 and Groups 3 and 4 may need to be pruned to ensure sufficient clearance for delivery vehicles accessing the service area and to install the acoustic barrier.

Mitigation / Justification: The canopies will need to be cut back to the edge of the service area to enable access and raised to 2.5m on the boundary side where the acoustic barrier will be installed. The pruning operations should be undertaken in accordance with BS 3998:2010 Tree work. Recommendations.

5 Pre-Development and Site Preparation Works

5.1 Refer to Appendix 1 for stage specific tasks.

5.2 Prior to any site works commencing, the following arboricultural specific actions need to be implemented:

a) An arboricultural contractor should be sought and the tree works recommended within Appendix 2 undertaken.

b) A supplier needs to be sought to provide the tree protection features as agreed with the Local Planning Authority.

5.3 Once the aforementioned tasks have been completed and prior to any site work the tree protection barriers need to be erected as per the Tree Protection Plan (Appendix 3). The barrier must encompass the root protection areas and crown extents of the retained trees to ensure that these areas remain free from disturbance.

5.3.1 The barriers needs to be installed according to the locations found on the Tree Protection Plan, Appendix 3 and conform to the specification within Appendix 4, unless a suitable alternative is agreed with the Local Planning Authority. All weather notices should be attached to the fencing marked with the following: '*Construction Exclusion Zone - Keep Out'* (a notice is provided within Appendix 7).

5.3.2 The project arboriculturalist or Local Authority Tree Officer should check the correct installation of the protective features prior to any site works commencing.

5.4 Material storage must be confined to areas outside root protection areas.

5.5 A copy of the Tree Protection Plan must be available on site.

5.6 Activities that could be harmful to root tissue (e.g. excavation, mixing of and washing out toxic substances such as cement) should be avoided in close proximity to trees, especially where the tree protection barriers are set back to allow contractor access to the proposed retaining walls.

6 Tree protection measures during development

6.1 Refer to Appendix 1 for stage specific tasks.

6.2 All ground levels where trees are located should be maintained. Changes to soil levels adjacent to trees can severely affect the trees structural integrity and its ability to gain moisture and nutrients from the surrounding soil. Unavoidable level changes that may affect retained trees, and not already accounted for within this method statement, should be assessed by the project arboriculturalist.

6.3 Building material storage and operations that can contaminate soil, such as cement mixing, must be confined to areas outside the root protection areas, which includes the new parking area once created.

6.4 Fires should not be lit within 5m of the foliage or drip line of the tree. Care should be taken and the fire should not be allowed to become large, and the wind direction noted.

6.5 The trees should not be used to attach notices, cables or other services.

7 Post-Construction Considerations

7.1 Refer to Appendix 1 for stage specific tasks.

7.2 Only once all major construction works have been completed can the protective barriers be removed.

7.3 Post development landscaping should be kept to a minimum within the root protection areas of retained trees.

7.4 Since trees are capable of influencing soil hydrology newly planted trees need to be situated where they will not interfere with built structures. Refer to NHBC Chapter 4.2 'Building near Trees' and Arboriculture Research and Information Note 'Tree Roots and Foundations' for further information.

Appendix 1: Arboricultural Tasks Sequence Table

Tree or Group Number	Pre-Construction Stage	Construction Stage	Post Construction Stage
Trees 1, 8, 15-18	Remove Trees		
Trees 2-7, 9-14, 19-21 Groups 1-4	Adhere to specification within Section 5. Set out and erect protective fencing as per Appendices 3 and 4. Attach notice in Appendix 7. Project arboriculturalist should check the correct installation of protective features prior to site works commencing.	Adhere to specification within Section 6. Monitor integrity of tree protection features daily; completing inspection record in Appendix 8.	Adhere to specification within Section 7. Remove tree protection measures. Complete landscape works adjacent to trees.

Appendix 2: Tree Data & Works Required

Key for Tree & Group Data tables:

No.	Tree Number
Species	Tree Name (common)
Age	Y = Young; SM = Semi-mature; EM = Early-mature M = Mature; OM = Over-mature; V = Veteran; D = Dead
DBH	Diameter at Breast Height (measured at 1.5m above ground level to the nearest cm)
Stems	The number of stems the tree has
Height	Overall tree height measured in metres
Crown Spread	Measured along the four cardinal points in metres
CH	Canopy Height (height of crown above ground)
1st Branch	The height and aspect of the 1st significant limb e.g. 2 NE = 1st limb at 2m growing in a north-easterly direction.
EstD	Indication of whether any of the trees dimensions were estimated: Y=Yes, N=No.
General Observations	Appraisal of trees general condition
EstCont	Estimated remaining contribution (years)
BS Cat	British Standard 5837:2012 retention category
Recommendation	Remedial works that may be required should the tree be retained

Tree Data and Work Required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
1	Rowan	SM	19	1	6	3	2	3	2	1.5	N	Codominant stems at 1.5m. Good health, reasonable form.	40+	B1	Remove tree
2	Rowan	SM	15	2-5	5	2	2	3	2	1.5	N	Multi-stemmed at base with included bark unions.	40+	C1	No work required
3	Rowan	SM	17	1	5	2	2	3	3	2	N	Good health and form.	40+	B1	No work required
4	Rowan	SM	12	1	3.5	2	1	2	2	0.5	N		40+	C1	No work required
5	Sycamore	EM	49	1	8.5	4	7	6	5	0.5	N	Stem leaning 15 degrees. Retaining wall 1m south of stem limits radial root growth. Small diameter roots exposed on side away from lean along with raised mound - suspect root severance when site was cleared. Soil on site side is very gravelly and appears to be made ground (extent of root damage to be investigated if retained). Codominant stems at 2m. Pruning stubs within crown - crown pruned to avoid contact with adjacent building.	20+	B1	No work required
6	Sycamore	SM	39	1	10	6	5	3	4	2	N	Multi-stemmed. Continuous canopy with adjacent tree(s).	40+	B2	No work required
7	Ash	SM	36	1	6	4	5	3	4	1.5	N	Stem leaning 10 degrees. Continuous canopy with adjacent tree(s).	40+	B1	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
8	Cherry spp	M	53	1	4.5	6	8	4	6	1.5	N	Gravel and concrete lumps around stem base. Codominant stems at 0.5m. Branch failure stubs. Pruning stubs within crown. Pruning wounds upon stem.	20+	C2	Remove tree.
9	Cherry spp	M	65	1	7	7	5	5	5	1.5	N	Stem in contact with wall. Pruning stubs within crown.	20+	B1	Crown lift on boundary side to 2.5m and ensure 5m clearance over service yard access.
10	Holly	EM	24	2-5	5	2	2	2	3	0.5	N		40+	C1	Crown lift on boundary side to 2.5m
11	Norway Maple	SM	40	1	11	5	3	5	5	0	N		40+	B1	Crown lift on boundary side to 2.5m
12	Apple	M	22	1	5	4	0	4	3	3	N	Suppressed form.	40+	C2	Crown lift on boundary side to 2.5m
13	Hawthorn	M	32	1	6.5	4	3	1	2	1	N	Suppressed form. Broken limb hanging within the crown.	40+	C2	Crown lift on boundary side to 2.5m
14	Prunus spp	M	26	2-5	4.5	2	1	0.5	2	1	N	Multi-stemmed at base. Branch failure stubs. Suppressed form.	40+	C2	No work required
15	Prunus spp	M	42	1	4	2	2	0.5	4	0.5	N	Infected with decay fungus Ganoderma spp. & Phelinus pomaceus. Crown dieback. Numerous limb failures.	<10	U	Remove tree.
16	Cherry spp	EM	31	1	5	2	4	4	3	2	N	Basal cavity. In a state of advanced physiological decline.	<10	U	Remove tree.

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
17	Apple	M	23	1	3.5	2	3	3	3	2	N	Basal decay. Minor deadwood.	20+	C1	Remove tree
18	Apple	M	27	1	4.5	3	3	3	3	1.5	N	Stem leaning 10 degrees.	40+	C1	Remove tree.
19	Ash	EM	50	1	13	6	4	5	5	5	N	Pruning wounds upon stem - crown kept high due to previous proximity to school buildings. Buildings likely to have effected root morphology.	20+	B1	No work required
20	Ash	EM	48	1	12	5	6	6	5	6	N	Pruning wounds upon stem - crown kept high due to previous proximity to school buildings. Buildings likely to have effected root morphology.	20+	B1	No wrok required
21	Ash	EM	52	1	10	6	5	7	5	3	N	Epicormic growth at base. Stem sweep. Pruning wounds upon stem - crown kept high due to previous proximity to school buildings. Buildings likely to have effected root morphology.	20+	B1	No work required

Group Data and Work Required

Group Number	Dominant Species	Lesser Species	DBH	Average Height	Age	Average Spread	Condition/Comments	Recommendations	EstCont	BS Cat
1	Cherry spp		9	5	Y	2	Cherry self-sets. Continuous canopy with adjacent tree(s).	Remove Trees	40+	C2
2	Elder Privet Buddleia		8	2	EM	2	Linear group with scrubby appearance.	Cut back from wall to enable installation of accoustic barrier	20+	C2
3	Leyland Cypress		20	10	SM	2	Southern section of nnmanaged hedge (central section has been removed).	Crown lift on boundary side to 2.5m to enable installation of accoustic barrier	20+	C2
4	Leyland Cypress		17	8	EM	2	Northern section of nnmanaged hedge (central section has been removed).	Crown lift on boundary side to 2.5m to enable installation of accoustic barrier	20+	C2

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Tree to be Retained

Tree to be Removed

Root Protection Area - to remain free from disturbance

Group of Trees to be Retained

Group of Trees to be Removed

Tree Protection Berrier (specification as per Appendix 4)

1/G1 Tree/Group Number

A1/B1/ C1/U BS5837 Retention Category

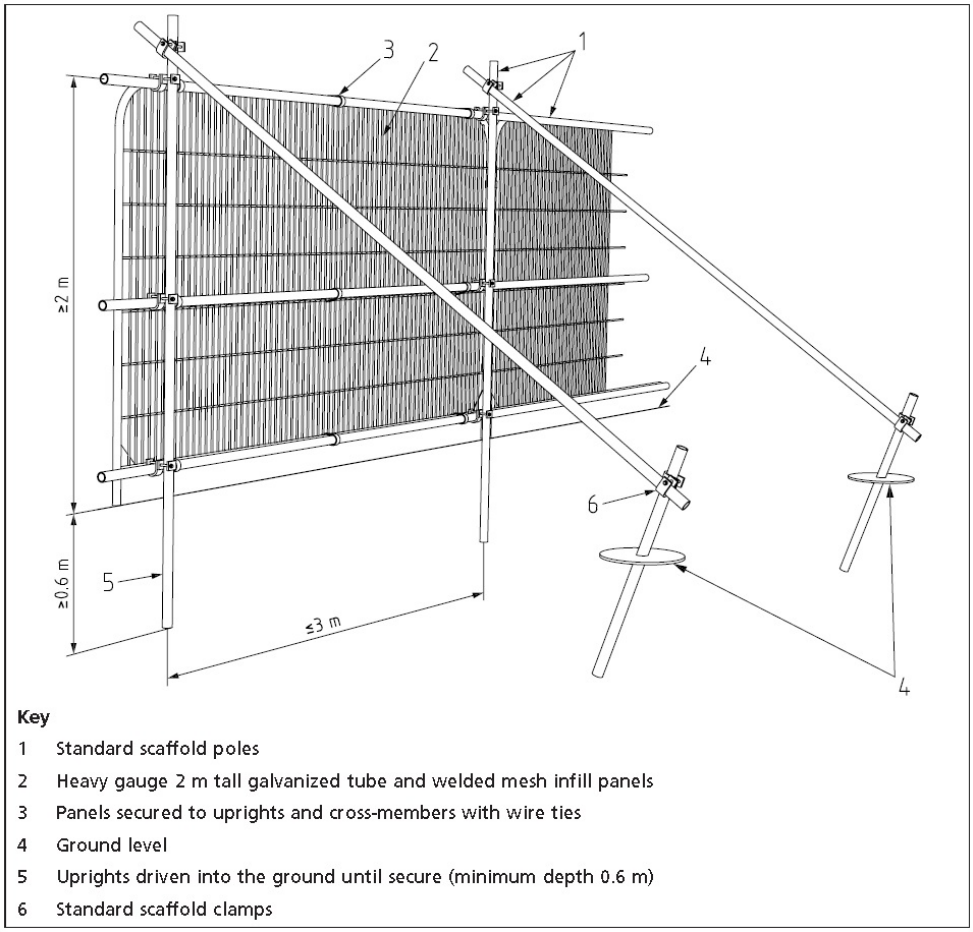
0 2 4 6 8 10 12 14 16 18 20 [m]

APPENDIX 3

Drawing Title:	Tree Protection Plan
Project:	Doncaster Road, Goldthorpe
Drawing Number:	ARB/CP/2046/TPP
Date:	December 2021
Scale:	1:200 @ A0

Appendix 4: Protective Fencing Specification

A:- Tree Protection Fence as per BS5837:2012



Key

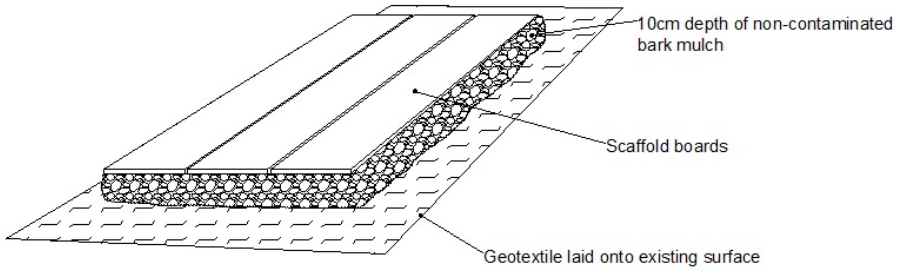
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Drawing Source: BS 5837:2012

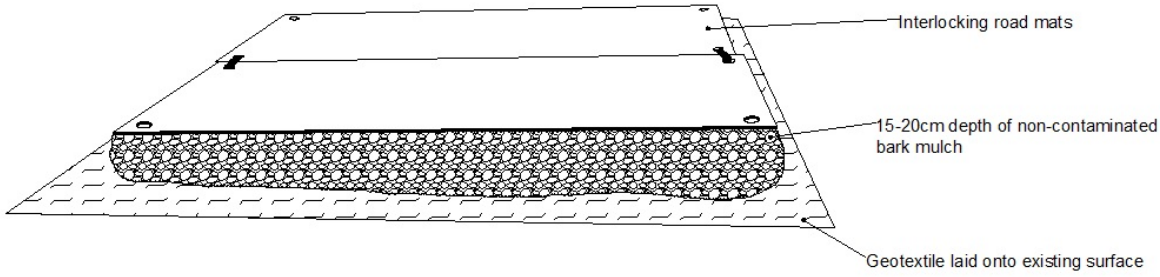
Appendix 5: Access within Root Protection Areas

Ground Protection to Enable Access within Root Protection Areas

Ground Protection for Foot Traffic Only



Ground Protection Suitable for Vehicals

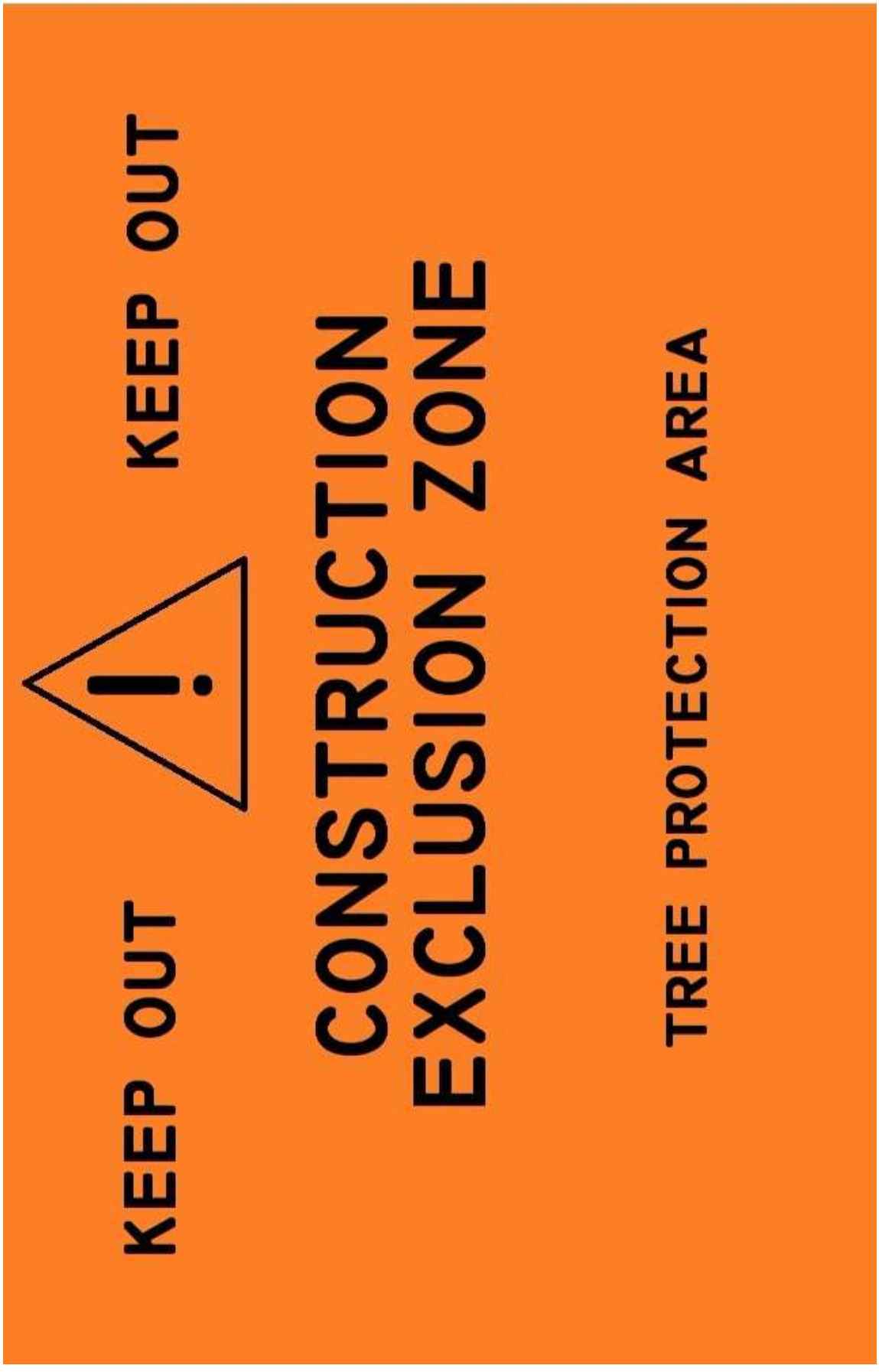


Where erecting scaffolding within areas of protected ground. The geotextile should be laid and then the scaffold footings placed on boards to spread the load. Ground protection as above should then be installed if access beneath the scaffolding is required.

Appendix 6: Removing Hard Surfaces & Other Excavations within Root Protection Areas

- All excavations within root protections areas must only be undertaken using hand tools or pedestrian operated machinery.
- The required excavations must be kept to a minimum to avoid unnecessary root damage and ideally undertaken during the presence of an arboriculturalist.
- Great care must be taken not to damage the bark of roots that can be retained in order to avoid wounds which could be exploited by pathogens.
- Exposed roots that can be retained must be wrapped with dry sacking if to be left exposed for extended periods e.g. overnight. Sacking must be removed prior to backfilling.
- All roots >25mm should be preserved and worked around. Where this is not possible, severance should only take place after consultation with the tree officer / appointed arboriculturalist. Roots must be cut using a sharp knife leaving as small a wound and as clean a cut as possible.
- Great care must be taken not to allow contaminants, such as oils, into the excavation.

Appendix 7: Construction Exclusion Zone Notice



Appendix 8: Tree Protection Zones Inspection Record

Tree Protection Zones Inspection Record – assessment of tree protection barriers and ground protection			
Date	**Checked By**	**Comments**	**Action Required?**

Appendix 9: Contact Details of Relevant Parties

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