elliottconsultancyltd.
arboricultural consultants

Location:
North Road,
West Boldon

Report Type:
Arboricultural Method Statement
inc. Impact Assessment

Ref:
ARB/CP/2492

Date:
April 2021

Wrens Nest, Underhill, Glaisdale, North Yorkshire, YO21 2PF
Tel – 01947 897001 Email: enquiries@elliottconsultancy.com
www.elliottconsultancy.com

Company Registration No: 5515572 VAT No: 89226571

Contents

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 construction works at the former primary school on North Road, West Boldon.

1.2 **Scope of the report:**

- This method statement provides arboricultural information and advice in relation to the proposed construction works at North Road, West Boldon, 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.

1.3 **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 of which covered by this method statement is the former primary school on North Road, West Boldon. Figure 1 shows the extent of the area.

Figure 1: **Area Covered (highlighted)**

Map data ©Google Imagery

2.2 The survey area, which measures approximately 0.46ha, previously housed a primary school. The school buildings have been demolished but concrete slabs, steps and retaining structures remain. The trees surveyed are positioned adjacent to the north, east and southern perimeters.

2.3 There are a number of trees which have an influence within the site that are located within adjacent properties. Details of these trees are annotated upon the Tree Protection Plan, Appendix 3, with basic constraints information within Appendix 2.

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. Two 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. Fourteen trees were classified as Category B.

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. Eleven trees were classified as Category C.

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. None of the trees 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	25, 27,		
B	4-11, 13, 16, 17, 22, 23, 25		
C	1-3, 12, 14, 15, 18-21, 24		
U			

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 Figures 2 and 3 it is proposed that five detached dwellings with supporting infrastructure will be constructed within the site and served by the existing access to the southeast off North Road. None of the trees existing trees would need to be removed to enable the development, however, Tree 2 is growing at the base of a stone wall which could lead to damage to the structure as the tree matures so it might be expedient to remove it to avoid future damage.

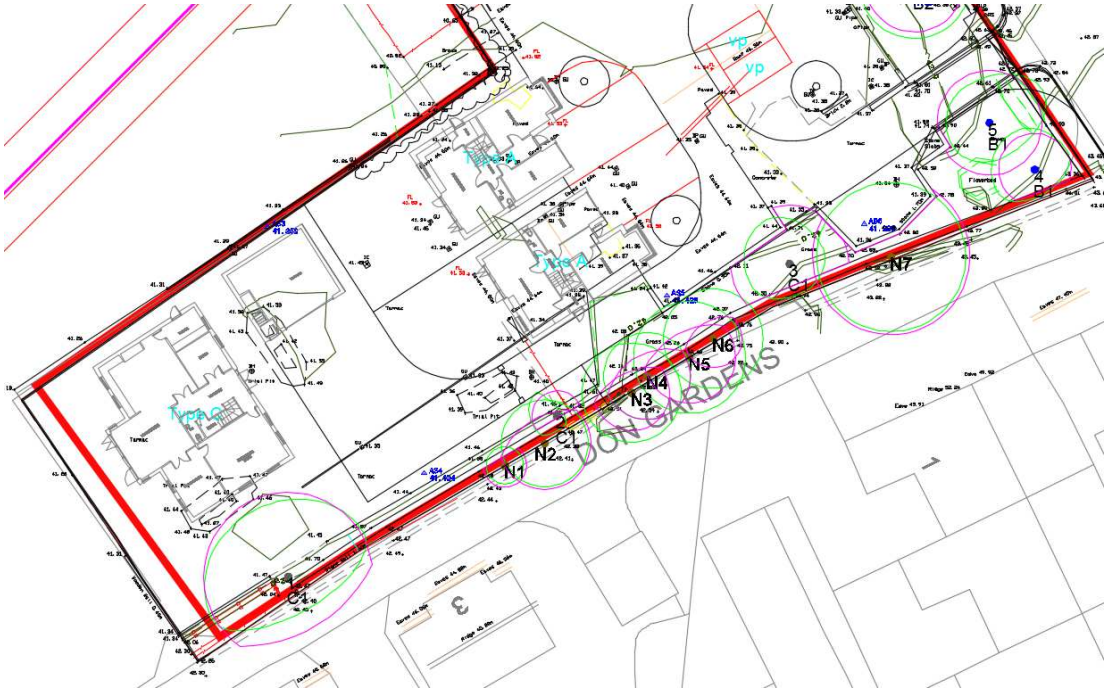


Figure 2: Proposed Layout – Southern Area

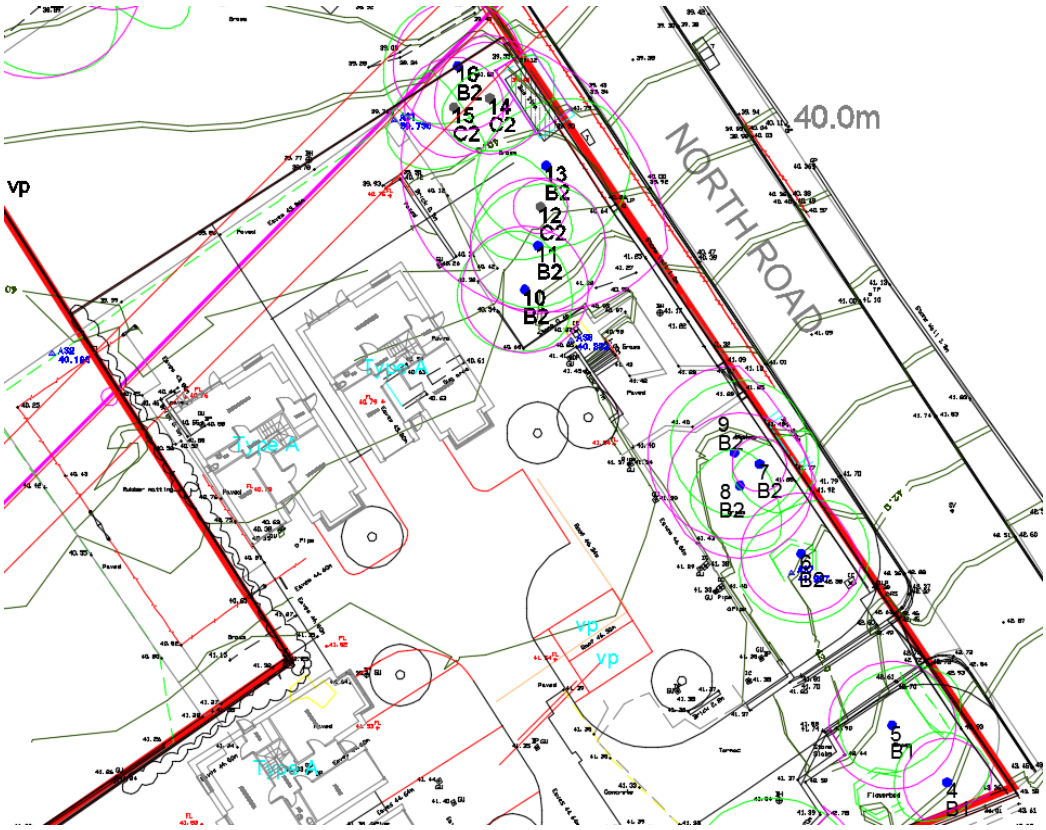


Figure 3: Proposed Layout – Northern Area

4.3 **Conflict 2: Construction within close proximity to trees.**

There are some proposed structures within or close to root protection areas and crown spreads of trees within the site and upon adjacent land.

Mitigation / Countermeasure: Trees N1 to N7 which are located upon adjacent land are at a situated at higher level than the development area. The retaining wall is likely to have restricted root growth within the site. Similarly there are walls within the site which are retaining higher ground levels upon which trees are located. The proposed development layout has been designed to retain these structures in order to ensure that root protection areas are unaffected. There would be varying degrees of root loss for Trees 3 and 5 from the proposed access road. For Tree 3 this will be relatively minor. The existing access road within the root protection area of Tree 5 is due to be widened along the northern side, although the splay of the access onto North Road represents a further encroachment. Whilst some root loss would be expected the tree has good vigour and is likely to tolerate the works. As such we recommend that it be retained and its condition monitored.

4.4 **Conflict 3: Location of proposed boundary features within root protection areas.**

Boundary features passing through the root protection areas of retained trees have

the potential to cause damage to root tissue.

Mitigation / Countermeasure: Any boundary features that pass through root protection areas would need to be limited to post-supported fences or railings. Post holes would need to be created using hand-operated tools only with care taken to minimise any disruption to root tissue. Excavations within root protection areas should be undertaken in accordance with the recommendations in Appendix 6.

4.5 **Conflict 4: Contractor access within Root Protection Areas**

Access by building contractors will be required within root protection areas of Trees 1, 10 and 13.

Mitigation / Justification: Operations that require assistance from heavy plant will not be permissible within the root protection areas but pedestrian access can be accounted for by installing ground protection that avoids damage to the roots and soil structure. A specification for ground protection is provided within Appendix 5 and should be installed within the areas indicated upon Appendix 3.

4.6 **Potential Conflict 5: Location of utilities runs with Root Protection Areas.**

Damage can be caused to root tissue during the installation of underground utilities.

Mitigation / Countermeasure: New underground utilities are not expected within any of the root protection areas. Any works to existing utilities will be undertaken with regard for the retained tree cover and will be in accordance with NJUG (National Joint Utility Groups) guidelines.

4.7 **Potential Conflict 6: Damage to trees within site during demolition and construction.**

Trees may be damaged due to a variety of reasons during a demolition and development process.

Mitigation / Countermeasure: A physical demarcation will be created between the retained trees and demolition/development areas to ensure that the trees and the medium within which they are rooting are protected from damage. The actual method of creating the demarcation might vary, where appropriate, but will typically be a physical barrier. The location for the barrier is detailed upon Appendix 3 with a specification within Appendix 4. If acceptable to the LPA we recommend the use of the Type B fencing.

4.8 **Potential Conflict 7: Pruning trees to create clearance to structures.**

Trees overhanging proposed plots, public open spaces or highways may require

pruning in order to ensure the necessary clearances.

Mitigation / Countermeasure: Pruning operations would primarily be limited to the crown lifting of some trees over the access road, driveways and gardens. All pruning operations would be undertaken in accordance with BS 3998:2010 Tree work. Recommendations.

4.9 **Potential Conflict 8: Damage to structures from trees.**

Trees are capable causing damage to structures either directly, such as physical contact damage or indirectly given the right conditions, such as subsidence.

Mitigation / Countermeasure: Chapter 4.2 'Building near Trees' of the NHBC Standards should be consulted by those responsible regarding building foundation depths required according to the species of adjacent trees, and for suitable species to be planted given their intended positions to new and existing structures.

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, Type B – if approved by 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 ground protection needs to be installed according to the locations upon Appendix 3 and the specification within Appendix 5.

5.3.3 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.

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.

6.6 The installation of any underground services near or adjacent to trees on the site shall conform to the requirements of National Joint Utilities Group (NJUG) publication Volume 4 (November 2007). If relevant, the intended service routes will be noted upon the Tree Protection Plan, Appendix 3. Additional information regarding excavations within root protection areas are provided within Appendix 6.

6.7 At the beginning of the construction phase, the site manager will appoint a delegated site representative who shall be responsible for continued checking of the protective barriers to ensure it is compliant with the exclusion zone. Appendix 8 contains a record sheet that can be copied for such use.

6.8 As recommended within BS 5837:2012, and specified within the Arboricultural Tasks Sequence Table, the development site should be visited by the project arboriculturalist on occasions to provide any arboricultural advice necessary and to ensure the efficacy of the Tree Protection features. Contact between the project manager and project arboriculturalist should be maintained throughout the works period so that supervision can be provided when operations with the potential to damage retained trees are being undertaken. Key stages that will require the attendance of a qualified arboriculturalist with evidence of the visit provided to LPA are:

- Inspection of tree protection features prior to site works commencing.

- Unarranged spot check(s) carried out during the course of the build.
- Supervision of construction activities that could lead to damage of retained trees.
- Site visit to ensure all development operations have been completed prior to tree protection features being removed and to inspect the condition of the trees.

The client or site manager should sign beneath to indicate intended compliance with the procedures outlined in section 6.8

Signature:  **Position:** Arboricultural Consultant

Signature: **Position:**

Note : PDF readers, such as Adobe Acrobat, allow for digital signing of PDFs using Fill & Sign features.

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 1-27 N1-N9	Adhere to specification within Section 5. Set out and erect protective fencing as per Appendices 3 and 4 (Type B). Attach notice in Appendix 7. Install the ground protection as per Appendices 3 and 5. 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 Survey Data

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
1	Ash	EM	52	2-5	10	6	3	7	7	1	N	Codominant stems at 1m. Ivy covered stem. Growing against wall. Pruned away from wires.	40+	C1	Crown lift to 3m and pruned back northern tip by 1m
2	Ash	Y	13	1	6	3	1	0.5	2	2.5	N	Growing at base of wall.	10+	C1	Consider removal to avoid damage to wall.
3	Birch spp	EM	30	1	12	4	3	3	4	2	N	Stem wound with fruiting bodies of decay fungus Daldinia concentrica on wound wood with minor decay evident.	10+	C1	Monitor progression of decay if retained
4	Birch spp	EM	23	1	9	4	2	3	4	0.5	N	Continuous canopy with adjacent trees.	40+	B1	No work required
5	Birch spp	EM	34	1	11	4	3	5	4	0.5	N	Continuous canopy with adjacent trees.	40+	B1	Ensure 4.5m clearance over access
6	Cherry spp	M	32	1	8	3	5	5	5	2	N	Slightly suppressed form. Continuous canopy with adjacent trees.	40+	B2	No work required
7	Cherry spp	M	16	2-5	5	1	4	4	2	1.5	N	Slightly suppressed form. Continuous canopy with adjacent trees.	40+	B2	Crown lift to 2m
8	Sycamore	SM	40	1	11	3	5	2	4	3	N	Codominant stems at 2.5m. Continuous canopy with adjacent trees.	40+	B2	No work required
9	Sycamore	SM	46	1	10	5	5	5	4	2	N	Codominant stems at 2m. Continuous canopy with adjacent trees.	40+	B2	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
10	Sycamore	SM	35	1	12	4	4	3	5	2	N	Continuous canopy with adjacent trees.	40+	B2	Prune back western tip by 1m.
11	Sycamore	SM	37	1	12	4	4	5	5	2.5	N	Continuous canopy with adjacent trees.	40+	B2	No work required
12	Sycamore	SM	15	1	4.5	4	3	2	5	1.5	N	Suppressed form.	40+	C2	Crown lift to 2m
13	Sycamore	M	71	1	13	4	6	6	5	2.5	N	Codominant stems with included bark unions at 1.1m. Continuous canopy with adjacent trees.	40+	B2	No work required
14	Ash	Y	27	2-5	9	2	4	5	4	2	N	Multi-stemmed at base. Continuous canopy with adjacent trees.		C2	No work required
15	Ash	Y	27	1	9	3	4	0.5	5	2	N	Suppressed form. Continuous canopy with adjacent trees.	40+	C2	No work required
16	Ash	Y	36	2-5	9	5	4	5	5	2	N	Codominant stems at base. Continuous canopy with adjacent trees.	40+	B2	No work required
17	Norway Maple	M	48	1	12	3	4	6	6	3	N	Continuous canopy with adjacent trees. Minor deadwood.	40+	B2	No work required
18	Swedish Whitebeam	EM	39	2-5	9	1	2	4	4	3	N	Twin-stemmed. Continuous canopy with adjacent trees.	40+	C2	No work required
19	Ash	SM	33	2-5	10	5	3	7	0.5	3	N	Codominant stems with included bark unions at base. Slightly suppressed form. Continuous canopy with adjacent trees.	40+	C2	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
20	Swedish Whitebeam	EM	34	2-5	9	1	2	4	4	2	N	Multi-stemmed at base. Continuous canopy with adjacent trees.	40+	C2	No work required
21	Ash	SM	36	2-5	10	7	1	7	2	1.5	N	Codominant stems with included bark unions at base. Slightly suppressed form. Continuous canopy with adjacent trees.	40+	C2	No work required
22	Swedish Whitebeam	EM	39	1	7	5	4	4	2	1.5	N	Continuous canopy with adjacent trees.	40+	B2	No work required
23	Ash	SM	35	1	8	7	0	6	3	3.5	N	Stem leaning 15 degrees. Slightly suppressed form. Continuous canopy with adjacent trees.	40+	B2	No work required
24	Norway Maple	M	46	1	14	5	6	5	2	3	N	Continuous canopy with adjacent trees. Failed included bark union at 2.5m.	20+	C2	Remove southern section of failed union.
25	Sycamore	EM	55	1	14	6	7	4	3	2	N	Epicormic growth at base. Continuous canopy with adjacent trees. Minor deadwood.	40+	A2	No work required
26	Norway Maple	EM	47	1	15	6	8	3	4	2	N	Stem leaning 15 degrees. Codominant stems with included bark unions at 2m. Included bark unions present throughout. Continuous canopy with adjacent trees. Minor deadwood.	40+	B2	No work required
27	Sycamore	EM	58	1	14	5	7	4	6	2	N	Epicormic growth at base. Continuous canopy with adjacent trees. Minor deadwood.	40+	A2	No work required

Trees Within Adjacent Properties

No.	Species	Age	DBH (cm)	Height (m)	Crown Spread* (m)	CH* (m)	General Observations	BS CAT
N1	Sycamore	Y	13	3.5	2	2		C1
N2	Sycamore	SM	28	5	4	2.5	Partially crown reduced beneath overhead cables	C1
N3	Sycamore	SM	22	5	4	2.5	Partially crown reduced beneath overhead cables	C1
N4	Sycamore	SM	25	5	4	2.5	Partially crown reduced beneath overhead cables	C1
N5	Ash	SM	27	5	5	1	Partially crown reduced beneath overhead cables	C1
N6	Sycamore	SM	18	5	4	1	Partially crown reduced beneath overhead cables	C1
N7	Sycamore	SM	46	9	6	3.5	Pruned away from overhead cables	B2
N8	Sycamore	SM	47	9	6	2.5		A2

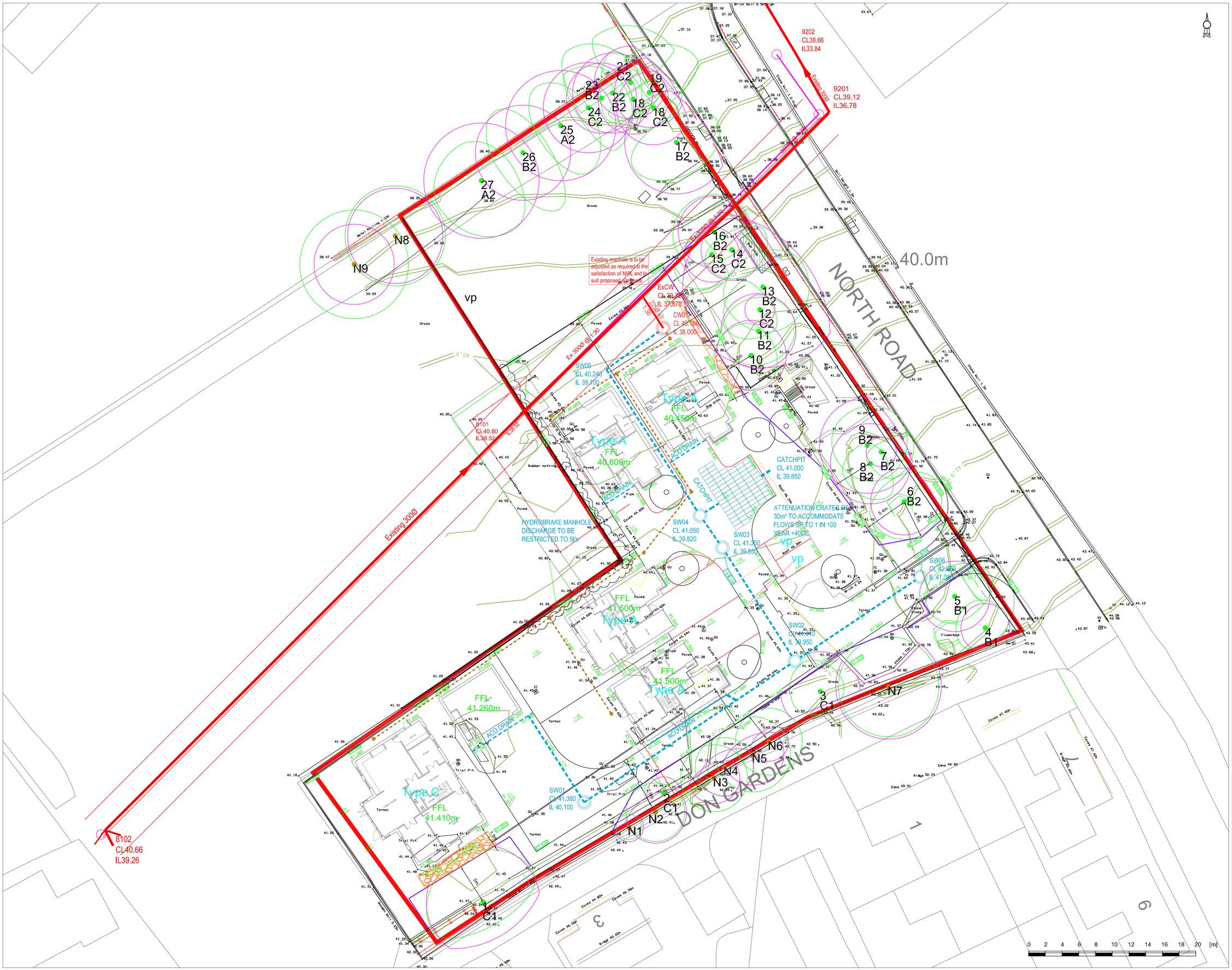
Note: Reduced details recorded to ensure constraints within site are represented but typical lack of direct access does not allow for full assessment with BS Catgeory

* Affecting site

No.	Species	Age	DBH (cm)	Height (m)	Crown Spread* (m)	CH* (m)	General Observations	BS CAT
N9	Sycamore	SM	39	11	7	2.5		A2

Note: Reduced details recorded to ensure constraints within site are represented but typical lack of direct access does not allow for full assessment with BS Catgeory

* Affecting site



elliottconsultancyltd.
arboricultural consultants

Wrens Nest, Underhill, Glaisdale
North Yorkshire YO21 2PF
01947 897001
enquiries@elliottconsultancy.com

Tree to be Retained

Tree to be Removed

Root Protection Area - to remain free from disturbance

Tree Protection Barrier (specification as per Appendix 4, type B - if approved by LPA)
Note: wooden site hoarding due to be erected to the west of Trees 6-16 may negate requirement for protective barrier in that area

Ground Protection (specification as per Appendix 5)

1/G1 Tree/Group Number

A1/B1/ C1/U BS5837 Retention Category

Tree and Root Protection Area within Adjacent Property (position and size possibly estimated)

Position of Tree within Adjacent Property

Average Crown Spread within Site

Root Protection Area

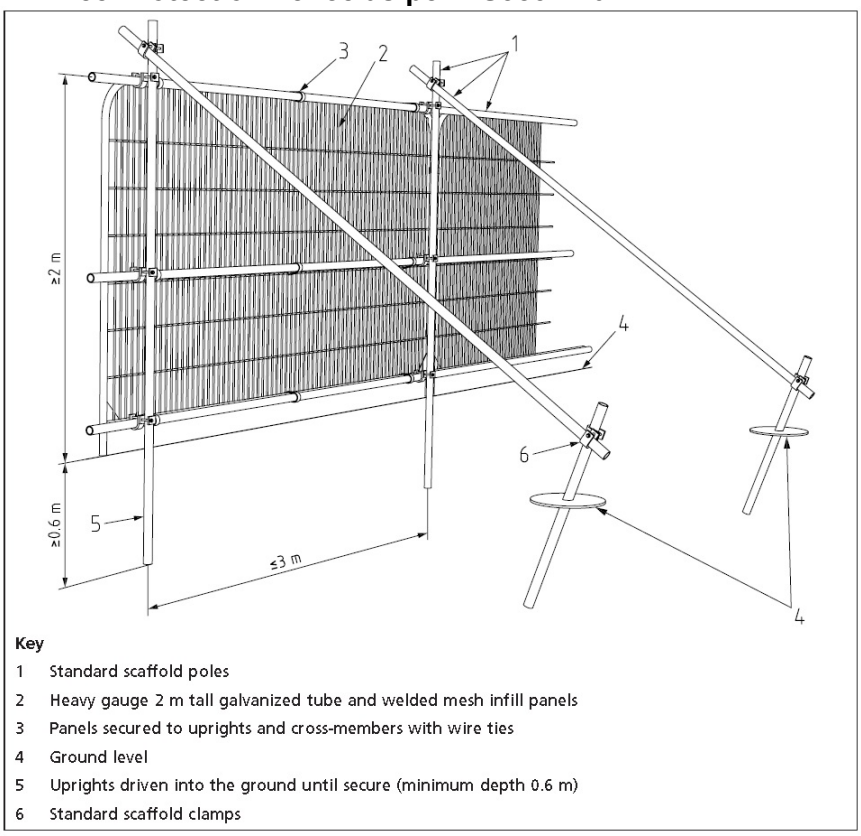
N1 ID of Tree Located within Adjacent Property

APPENDIX 3

Drawing Title:	Tree Protection Plan
Project:	North Road, West Boldon
Drawing Number:	ARB/CP/2492/TPP
Date:	April 2021
Scale:	1:200 @ A1

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

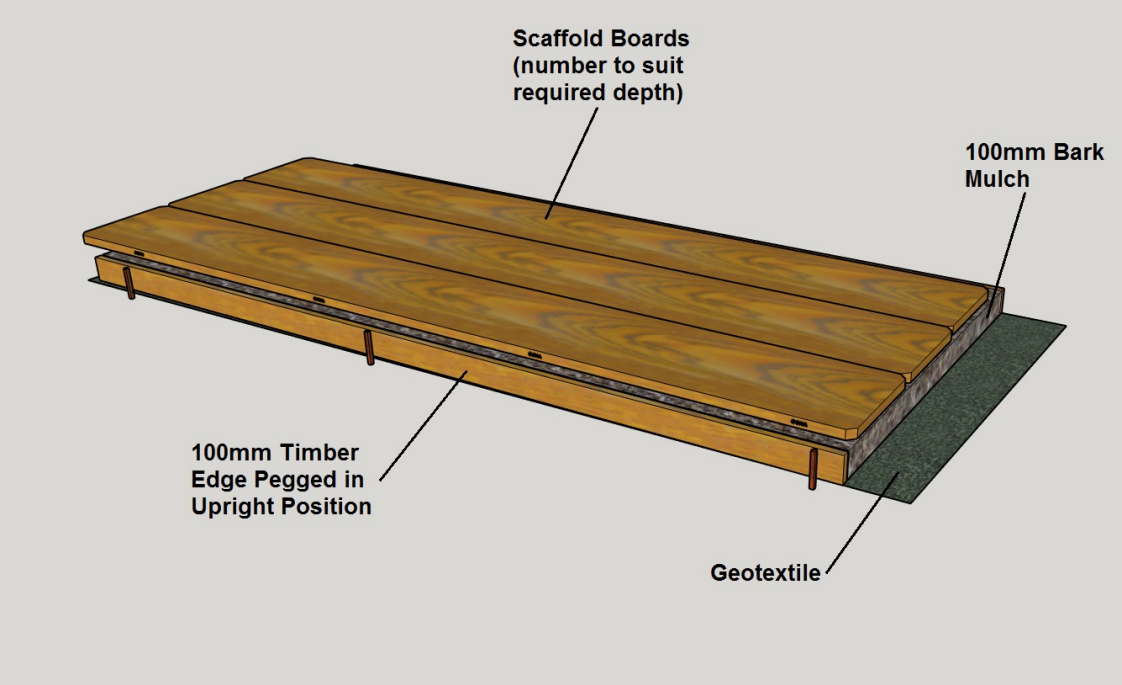
B:- Alternative Fencing Detail: Adequate protection - provided LPA approve its use

Weldmesh fence panels attached together using fence couplers bolted to 100mmx100mmx2400mm treated timber fence posts driven 500mm into the ground. Use of plant to assist with erection only from outside of root protection area.

Appendix 5: Access within Root Protection Areas

Ground Protection to Enable Access within Root Protection Areas

For Pedestrians Only

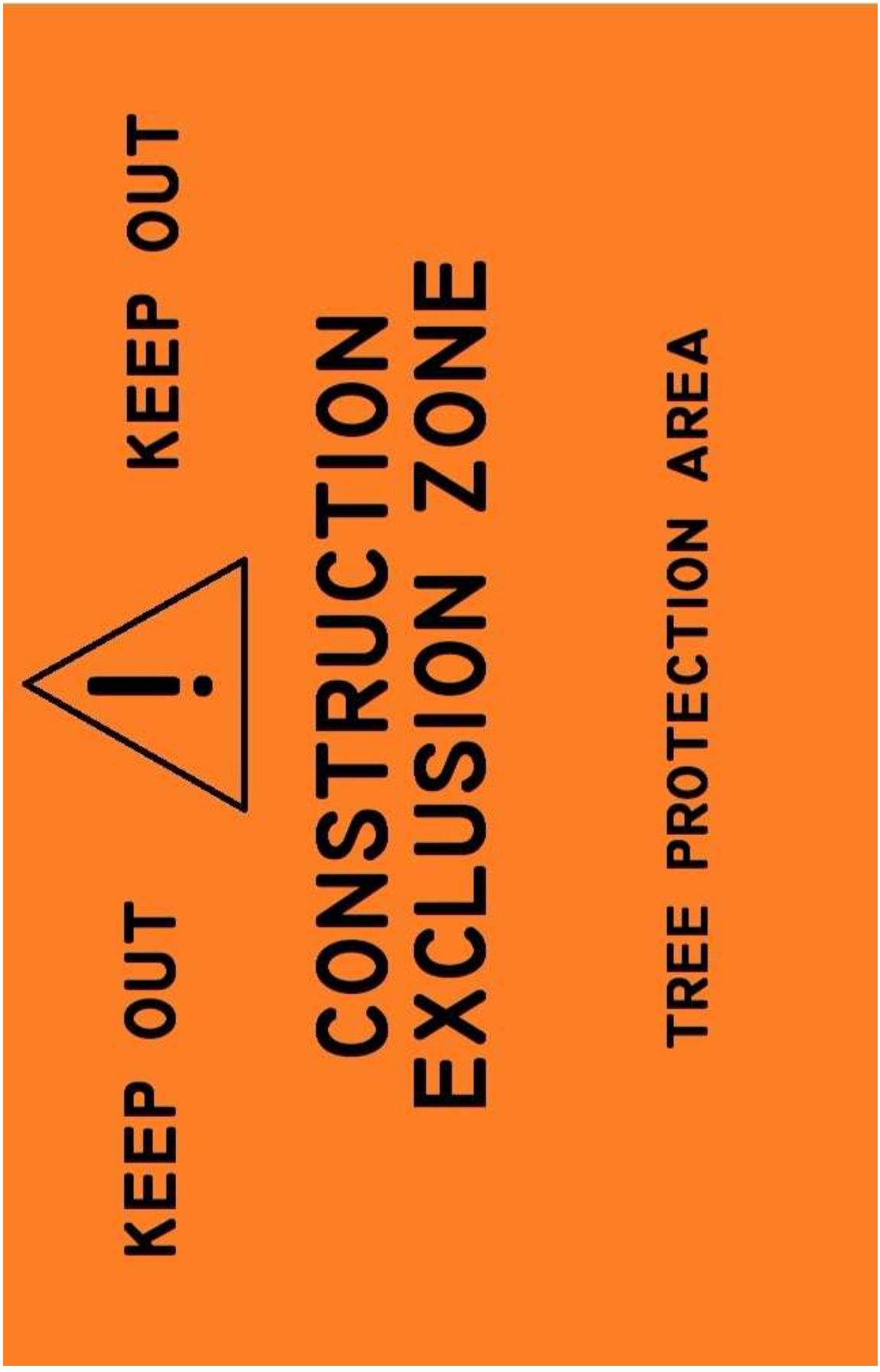


Where erecting scaffolding within areas of protected ground. The geotextile should be laid and then the scaffold footings placed on boards to spread the load. Ground protection as above should then be installed if access beneath the scaffolding is required.

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

Arboricultural Consultant

Charles Prowse
Elliott Consultancy Ltd
Wren's Nest
Underhill
Glaisdale
YO212PF

01947 897001
07810200968
charles@elliottconsultancy.com

Local Planning Authority

Town Hall & Civic Offices
Westoe Road
South Shields
United Kingdom
NE33 2RL

0191 424 7421
developmentservices@southtyneside.gov.uk