TPS

Appendix 1 Tree survey and explanatory notes

Site: Land south of Thorpe Road Weeley
Date of Survey: 12/03/2017 29/10/2017

OHLE = over head line equipment

Estimated due to dense ivy/surrounding vegetation or 3rd party ownership.

Surveyor J Choat
Weather: Hot/dry/clear

						Branch spread											
Tree ref	Species	Height in m	Stem diameter in mm	RPA in M2	Radial distance required for RPA	N	E	S	W	Height of crown clearance in m	Age class	Ground condition	Water demand	Observations	Preliminary management recommendations	Works urgency	Estimated remaining contribution in years	Category grading
G2	Oak, Hazel, Sweet Chestnut, Hawthorn	12	500	113.112	6	3	3	3	3	2	M	Bare soil	Varies	Small woodland/copse with PROW running through, possibly historical holloway. Evidence of coppicing, although secondary woodland flora, hazel indicating at least 200 years of age. Good wildlife interest.	None	0	30+	A1/2/3
G3	Oak, Hazel, Sweet Chestnut, Hawthorn, Field maple	12	500	113.112	6	3	3	3	3	2	M	Bare soil	Varies	Small woodland/copse with PROW running through, possibly historical holloway. Evidence of coppicing, although secondary woodland flora, hazel indicating at least 200 years of age. Good wildlife interest.	None	0	30+	A1/2/3
T1	Ash	16	600	162.88128	7.2	5	5	5	5	3	M	Bare soil	Moderate	Base not inspected due to dense surrounding vegetation. Growing within small woodland / copse.	None	0	30+	A1/2/3
T2	Oak	16	760	261.3339648	9.12	7	7	7	7	3	M	Bare soil	High	Growing within woodland/copse. Good condition.	None	0	30+	A1/2/3
T3	Oak	16	590	157.4971488	7.08	5	5	5	5	3	M	Bare soil	High	Twin stem tree. Growing within woodland/copse. Good condition.	None	0	30+	A1/2/3
G4	Oak, Hazel, Sweet Chestnut, Hawthorn	12	500	113.112	6	3	3	3	3	2	M	Bare soil	Varies	Small woodland/copse with PROW running through, possibly historical holloway. Secondary woodland flora. Good wildlife interest.	None	0	30+	A1/2/3
G5	Oak, Hazel, Sweet Chestnut, Hawthorn	12	500	113.112	6	3	3	3	3	2	M	Bare soil	Varies	Small woodland/copse with PROW running through, possibly historical holloway. Secondary woodland flora. Good wildlife interest.	None	0	30+	A1/2/3
T4	Oak	16	940	399.7830528	11.28	7	7	7	7	3	M	Bare soil	High	Aged tree. Ivy clad to 12m.	None	0	30+	A1/2/3
G6	Oak, Hawthorn	5	200	18.09792	2.4	2	2	2	2	3	M	Bare soil	High	Group forming hedgerow with some gaps. Oak have been reduced/pollarded below OHLE. Good screening from Railway. Good wildlife interest and connecting to other green features.	None	0	30+	A1/2/3
T5	Oak	10	500	113.112	6	5	5	5	5	2	EM	Bare soil	High	Base not inspected due to dense surrounding vegetation. Branch snapped out at 5m.	Remove torn branch and clean wound.	3	30+	A1/2/3
T6	Willow	4	300	40.72032	3.6	0.5	1	1	1	2	EM	3rd party	High	3rd party tree. Recent pollard.	None	0	10+	C1
T7	Lime	7	300	40.72032	3.6	3	3	3	3	2	EM	3rd party	Moderate	3rd party tree. Some pruning on property side.	None	0	20+	C1
H1	Thorn, poplar	3	300	40.72032	3.6	3	3	3	3	0	M	Bare soil	High	Good screening trees. Succession of blackthorn on outer edge. 1 poplar has failed in to field.	Remove failed poplar, check base of remaining tree once area cleared.	3	20+	B1/2/3
G7	Oak, Hawthorn	5	300	40.72032	3.6	2	2	2	2	3	M	Bare soil	High	Group forming hedgerow with some gaps. . Good screening from Railway. Good wildlife interest and connecting to other green features.	None	0	30+	A1/2/3
H2	Thorn	1.5	75	2.54502	0.9	0.5	0.5	0.5	0.5	0	Y	Bare soil	High	Planted hedgerow maintained at current dimensions cut on regular pruning regime. Good connections to other wildlife / green features.	None	0	20+	B1/2/3
H3	Thorn, bramble, ivy	1.5	200	18.09792	2.4	0.5	0.5	0.5	0.5	0	M	Bare soil	High	Thorn clad with bramble and ivy. Good Wildlife interest and connection to other wildlife /green features.	None	0	20+	B1/2/3
G8	Holly	5	460	95.7379968	5.52	3	3	3	3	1	EM	Bare soil	Low	Group of coppice hedgerow trees forming large coppice stool.	None	0	30+	A1/2/3
T8	Oak	5	460	95.7379968	5.52	3	3	3	3	1	EM	Bare soil	High	Low branches. Good condition.	None	0	20+	B1/2/3
T9	Hawthorn	4	380	65.3334912	4.56	2	3	2	1	0	M	Bare soil	High	Asymmetric crown. Leaning stem.	None	0	20+	C1/2/3
T10	Oak	5	400	72.39168	4.8	3	3	3	3	2	EM	Bare soil	High	Ivy and bramble clad, unable to fully assess base.	Clear ivy and bramble and reassess.	3	20+	B1/2/3
T11	Oak	11	980	434.5310592	11.76	6	6	6	6	2	M	Bare soil	High	Aged tree. Good condition. Low branches.	None	0	30+	A1/2/3
T12	Oak	12	600	162.88128	7.2	6	6	6	6	4	M	Bare soil	High	Good condition.	None	0	30+	A1/2/3
T13	Hawthorn	5	520	122.3419392	6.24	1	1	1	3	2	M	Bare soil	High	Decaying/lapsed coppice. Good wildlife value due to age and decaying parts.	None	0	15+	C1/2/3
T14	Oak	14	800	289.56672	9.6	6	6	6	6	2	M	Bare soil	High	3rd party tree. Slightly suppressed crown. Unable to fully inspect base. Aged tree.	None	0	30+	A1/2/3
T15	Oak	14	880	350.3757312	10.56	6	6	6	6	2	M	Bare soil	High	3rd party tree. Lapsed pollard, some veteran associations. Good wildlife tree.	None	0	30+	A1/2/3
H4	Thorn, bramble, ivy	1.5	200	18.09792	2.4	0.5	0.5	0.5	0.5	0	M	Bare soil	High	Thorn clad with bramble and ivy. Good Wildlife interest and connection to other wildlife /green features.	None	0	20+	B1/2/3
H5	Thorn, bramble, ivy	1.5	200	18.09792	2.4	0.5	0.5	0.5	0.5	0	M	Bare soil	High	Thorn clad with bramble and ivy. Good Wildlife interest and connection to other wildlife /green features.	None	0	20+	B1/2/3
H6	Thorn, bramble, ivy	1.5	200	18.09792	2.4	0.5	0.5	0.5	0.5	0	M	Bare soil	High	Thorn clad with bramble and ivy. Good Wildlife interest and connection to other wildlife /green features.	None	0	20+	B1/2/3
H7	Thorn, bramble, ivy	1.5	200	18.09792	2.4	0.5	0.5	0.5	0.5	0	M	Bare soil	High	Thorn clad with bramble and ivy. Good Wildlife interest and connection to other wildlife /green features.	None	0	20+	B1/2/3
H8	Thorn, bramble, ivy	1.5	200	18.09792	2.4	0.5	0.5	0.5	0.5	0	M	Bare soil	High	Thorn clad with bramble and ivy. Good Wildlife interest and connection to other wildlife /green features.	None	0	20+	B1/2/3
T16	Yew	9	870	342.4578912	10.44	4	4	4	4	1.5	M	Bare soil	Low	Tree of significant age, fairly unusual for the area, set within historical property providing good historical context.	None	0	50+	A1/2/3

T17	Horse chestnut	3	310	43.4802528	3.72	3	3	3	3	1	EM	Bare soil	Moderate	Spiral cracks, old bleeding canker symptoms.	Consider felling	3	10	C1
T18	Holly	10	450	91.62072	5.4	3	3	3	3	2	M	Bare soil	Low	Good condition.	None	0	30+	A1/2/3
T19	Holly	5	230	23.9344992	2.76	2	2	2	2	1	EM	Bare soil	Low	Multi stem tree.	None	0	20+	B1/2/3
G9	Fruit	3	200	18.09792	2.4	2	2	2	2	1	EM	Grass	Moderate	Group of fruit trees with leaning stems and basal wounds.	None	0	10+	C1
T20	Yew	6	320	46.3306752	3.84	2	2	2	2	1	EM	Bare soil	Low	Sparse crown. Climber within crown.	Remove climber.	3	20+	C1
H9	Leyland cypress	3	200	18.09792	2.4	1	1	1	1	0	EM	Bare soil	High	Poor condition. Browning/die-back.	None	0	10	C1
H10	Thorn, holly, ivy	4	300	40.72032	3.6	1	1	1	1	0	EM	Bare soil	Varies	Hedgerow with some gaps, some non native trees beyond. Reasonable screening. Bases not inspected.	None	0	20+	B1/2/3
T21	Holly	4	180	14.6593152	2.16	1	1	1	1	2	Y	Bare soil	Low	Sparse crown. Die back of higher apex.	Monitor, likely to decline further.	3	10	C1
T22	Ash	17	500	113.112	6	1	4	4	4	3	M	Bare soil	Moderate	Ivy clad, situated within hedgerow. Unable to fully assess.	Sever ivy to 1m and re-inspect.	3	20+	A1/2/3
T23	Ash	19	700	221.69952	8.4	6	6	6	6	3	M	Bare soil	Moderate	Ivy clad, situated within hedgerow. Unable to fully assess. Occasional deadwood within crown.	Remove any deadwood over public right of way. Sever ivy to 1m and re-inspect.	3	20+	A1/2/3
T24	Hawthorn	5	400	72.39168	4.8	2	2	2	2	2	M	Bare soil	High	Aged tree. Multi stem tree. Some minor crown decline. Situated within copse/small woodland.	None	0	20+	A1/2/3
T25	Sweet chestnut	15	400	72.39168	4.8	3	3	3	3	3	M	Bare soil	Moderate	Situated within small copse/woodland. Base restricted due to woodland debris.	None	0	20+	A1/2/3
G10	Thorn, sweet chestnut, ash	17	400	72.39168	4.8	4	4	4	4	0	M	Bare soil	Varies	Small copse/woodland, good screening, wildlife and landscape value.	None	0	30+	A1/2/3
T26	Oak	12	630	179.5766112	7.56	4	4	4	4	3	M	Bare soil	High	Former hedgerow tree, hedgerow since grubbed out.	None	0	30+	A1/2/3
T27	Oak	12	700	221.69952	8.4	4	4	4	4	3	M	Bare soil	High	Former hedgerow tree, hedgerow since grubbed out. Aged tree with some veteran associations.	None	0	30+	A1/2/3
T28	Oak	12	1005	456.9837912	12.06	4	4	4	4	3	M	Bare soil	High	Former hedgerow tree, hedgerow since grubbed out. Aged tree with some veteran associations.	None	0	30+	A1/2/3
G11	Ash, alder, hawthorn, sallow	15	700	221.69952	8.4	4	4	4	4	0	M	Bare soil	Varies	Wetland trees rooted along Holland Brook, tree synonymous with type of habitat. Occasional alder have been previously coppiced.	Habitat could be improved with addition of further native stock and perhaps 1 - 2 native black poplar (preferably female). Some works to	3	30+	A1/2/3
H11	Oak, field maple, hawthorn, blackthorn	8	400	72.39168	4.8	4	4	4	4	0	M	Bare soil	Varies	Hedgerow of native specimens rooted on railway boundary. Good screening properties. Good wildlife properties with good connectivity to aged trees and other green features.	None	0	30+	A1/2/3

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Explanatory Notes

Referencing
Each tree is given a unique reference number and plotted on the attached plans for clear identity. Individual trees are referenced as T1, T2 etc, Groups G1, G2 etc Hedgerows H1, H2 etc and Woodlands W1, W2 etc

Species
All species are recorded using common names. Identification is made using experience and knowledge.

Tree dimensions
Tree height is measured and recorded in meters and taken from the base of the stem to the tip of the crown. Height is estimated using experience and knowledge.

Diameter at Breast Height (DBH) is measured at approximately 1.5m from the ground up the stem and is measured and recorded in millimetres. DBH is measured accurately using a diameter tape.

Crown spread is measured in meters from the stem to the extent of the crown spread to each compass point (NESW). Crown spread is estimated using experience and knowledge.

Crown clearance is the height from ground level to the lowest branch and is measured in meters. Crown clearance is estimated using experience and knowledge.

Age class
Age class falls in to 4 categories:

Y	Young
EM	Early Mature
M	Mature
OM	Over Mature

Observations
The biological condition of the tree is assessed and noted. Notable defects are recorded; fruiting bodies, cankers, die back, exudates, etc are recorded.

The mechanics of the tree are assessed and noted. Notable defects are recorded; buckling, rib formation, stresses, bulges, soil cracks, large cavities or wounds, tight branch junctions, etc are recorded.

Preliminary management recommendations
Tree management is recommended following the assessment of physiological and structural condition. Recommended works may include, no work required, crown reduction, crown lift, fell, crown thin, monitor etc.

Estimated remaining contribution in years
An estimate of remaining life expectancy recorded in years. Estimated remaining contribution is made using experience considering the structural and physiological condition of the tree, nuisance, previous management, etc.

Category grading and colour coding on plan
A (Green square) high quality and value

B (Blue square) moderate quality and value

C (Grey square) low quality and value

U (Red Square) those that cannot be retained as living trees

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Sub categories

1 arboricultural values

2 landscape values

3 cultural values, including conservation

Works priority

1 Works required immediately to make the tree safe

2 Works required within 60 days

3 Works required as part of routine operations

0 no works required

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Appendix 2 Barrier construction profile

Diagram 1 Weldmesh panels with block supports pegged to brace light impact

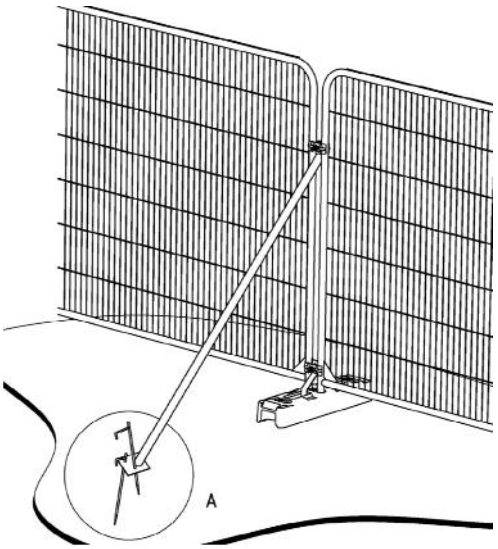

Diagram 2 Weldmesh panels with block supports and further block supports to brace intermediate impacts

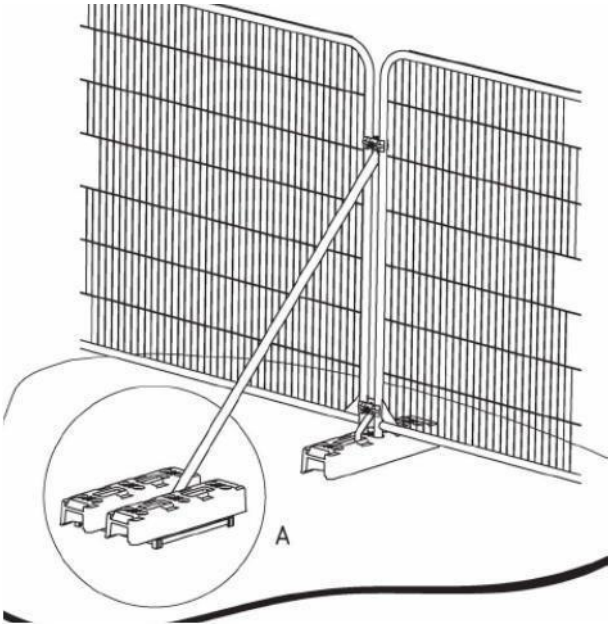

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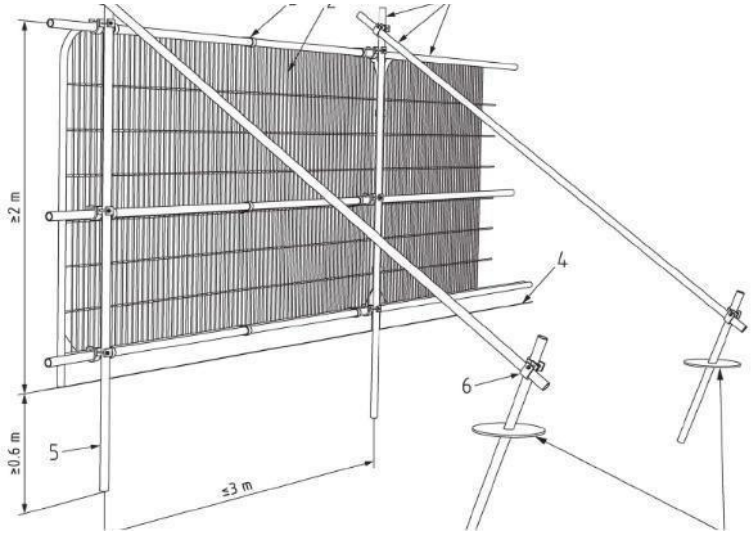
Diagram 3 Weldmesh panels with scaffold frame posts driven into the ground to brace heavy impacts



Appendix 3 Example of informative to be placed on barrier

Construction Exclusion Zone

These trees have been retained and protected as part of the planning permission for this site.

Any breach of the protection will result in enforcement action from the Local Authority.

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Appendix 4 Tree protection plan

Key Arboricultural Work Phasing

All methods statements below and annotations to the plan are to be read in conjunction with the arboricultural method statement Ref TPSarbQU0018

The installation and removal of the tree protection is to be supervised by the project arboriculturist and confirmed as correct. Further monitoring assessments during the construction phase are recommended, the condition of the tree protection will be assessed during each visit.

Phase 1 - Tree works , see schedule below, no vehicle movements within the RPA

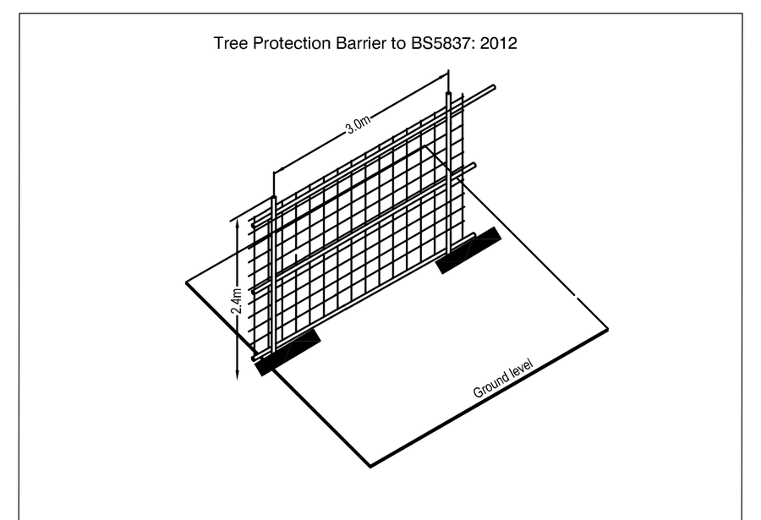
Phase 2 - Build / demolition phase barrier protection
- Erect scaffold frame as per drawing provided and method statement provided below.
- Install heras panels, slot into rubber block supports and cable tie to scaffold frame and to each additional panel ensuring continuous barrier.
- Cable tie weatherproof informative to barrier

Phase 3 - Intensive build phase. Hand excavation as per method statement provided below at locations shown in drawing to left

Phase 4 - Soft and hard landscaping phase barrier protection
- Move barriers to ensure protection of the stem and as much of the crown as possible whilst allowing access to carryout the approved soft and hard landscaping - see method statement below

Phase 5 - Removal of ground and barrier protection.
- Temporary barrier is to be removed first then any ground protection as the end phase of development once the intensive build and landscape phase is complete.

Tree Protection Barrier to BS5837: 2012



Protective barriers should be erected prior to the commencement of any site clearance, demolition or development . No storage within the construction exclusion zone (fenced areas)

The fencing should utilise a scaffold framework in accordance with the detail shown above.

Weldmesh panels should be set in rubber block supports and cable tied or clamped with scaffold clamps, to the adjacent panel.

The fencing should be erected at or beyond the extremities of the RPA as shown on the tree protection plan and should not be moved unless agreed with the project arboriculturist and local planning authority.

Informatives should be placed on barriers at 1.5m in height at 3m intervals, facing outwards, Informatives should clearly provide details of the protection zone and correct procedures.

Construction Exclusion Zone

No access is permitted

The trees beyond this protected zone are subject to planning conditions and statutory protection

Any breach of this zone will result in enforcement action by the Local Authority

Sequential method statement for hand excavation and root pruning - H3, T4, G5, G8, H8, T8, G10, T11, T23 and T24

1. Remove grassed surface with turf remover set at 50mm, store all turfs outside of RPA. Loosen underlying soils with air spade or fork / rake. Carefully remove topsoil / upper soil horizon using handheld tools only (spade, shovel, soft brush, trowel) to achieve excavation depth of 100mm for preparation of levels for informal / permissive footpaths and 200 - 300mm for construction of adoptable highways and footways.
2. Where roots are encountered but pliable push to side of pit or downwards.
3. Any exposed roots should immediately be wrapped or covered in damp hessian to prevent desiccation and to protect them from rapid temperature changes.
4. If required, sever any roots with a diameter less than 25mm (use a sharp tool to provide a clean cut across the cross section near to a root junction/growth point).
5. Avoid severing roots greater than 25mm or clumps of roots (root mats). If this is necessary, then request an arboriculturist to attend the site to assess likely impact upon tree health and future stability.
6. Prior to backfilling any roots should be removed from the protective wrapping and surrounded by sharp sand, or other loose granular fill, before soil or other material is replaced. The backfill is to be free from any contaminants or foreign objects.
7. Monitor tree health during next growth season. Check leaf colour, size, density and extension growth. Monitor again the following season.

Soft surfaces within RPA
- No tractor mounted or heavy plant rotavating machinery is to be used unless working on surface fit for purpose to reduce/ spread load and prevent soil compaction.
- Cultivation is to be completed using manual hand tools only.
- Existing soil is to be used, where additional soil is required it should be contaminant free, well drained and suitable PH, texture and structure for the site and planting/ existing trees/ shrubs.
- Damage to roots is to be avoided, large structural roots may be seen at or near the surface and where they radiate from the stem of the tree from large buttresses. After around 4m radial distance structural roots tend to taper to around 3cm in diameter.
- Changes in ground levels are to be avoided, any lowering or raising of levels should be carried out using a suitable method statement that provides continued soil conditions of gas exchange and water percolation.
- Planting is to be done with care and to avoid severing tree roots; generally, planting should be completed outside the RPA.

Legend:

Tree reference	T1
Tree and crown spread	
Root protection area	
Temporary barrier protection	
Trees / hedges to be removed	
Hand excavation	
Crown reduction	

Notes:

This drawing was produced in colour, a monochrome copy should not be relied upon.

Project: Land south of Thorpe Road, Weeley

Drawing Title: Tree Protection Plan

TPS
Arboricultural Consultancy

25 Frietuna Road
Frinton On Sea
Essex
CO130QP

T +44 (0)7813204621
E info@treeplanningsolutions.co.uk
W www.treeplanningsolutions.co.uk

Date:	1st March 2023	
Scale:	1:1000 @ A0	
Drawing Number:	TPSarb6990117 TPP	Rev B

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Appendix 5

Example of site monitoring form

Tree Planning Solutions

Contract Monitoring Form

Details

Date	
Time	
Surveyor	
Client	
Site	
Ref	

Trees

Tree ref	Condition	Recommendations

Barrier

Tree ref	Barrier type	RPA radial distance as per planning permission	Actual barrier radial distance at site	Condition of barrier	Condition of signage	Comments

Ground Protection

Tree ref	Type of ground protection installed	RPA distance as per planning permission	Actual distance of ground protection at site	Condition of ground protection	Comments

Additional Comments