YEW TREE AND GARDENS

Client: Distington Big Local – Land off Church Road,
Distington
Workington,
Cumbria.

ARBORICULTURAL IMPACT ASSESSMENT
FOR PROPOSED SOCIAL HOUSING DEVELOPMENT

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CONTENTS

1. SITE

A. SITE DESCRIPTION

1. The proposed development site is comprised of a site at Church Road, Distington, Workington, Cumbria.

2. The development area is as indicated in Appendix 3: Tree Constraints Plan and tree stock is as detailed within Appendix 1: Tree Schedule and Appendix 2: Tree Location Plan

3. The survey area consists of an area of open ground with rough grass / scrub cover and the boundaries of this area.

4. Tree stock within the survey boundaries is comprised of a small number of tree groups, former hedge line and a single multi stemmed tree. All of this tree stock is located along or adjacent to the Western boundary of the site. No trees are locate din the rest o f the site and vegetation around the Southern and Eastern boundaries is confined to ivy and small shrubs located off site in adjacent gardens of dwellings.

5. The survey site is bounded by dwellings to the North, South and East, a footpath and the grounds of Distington Primary School are located to the West of the site boundary.

B. SURVEY DETAILS

1. The site was surveyed on 08/09/2020, tree heights were estimated via use of a clinometer (Suunto PM-5), measurements of DBH taken at 1.5m height and crown spread was taken by ground measurements. Images were taken at the time of the site survey with a Sony DCH 4000 camera. The position of tree references within the site are taken from the client supplied topographic survey. Sun positions were estimated on site via Sun Surveyor software. Weather conditions were overcast with occasional rain and light to no wind.

2. All surveying of tree stock on the site was carried out visually from the ground only. Where ivy cover was encountered on trees then only limited visual checking of structure and potential defects was possible.

3. At the time of surveying all trees were recorded on standard tree record sheets, see Appendix 1: Tree Schedule. Trees were surveyed throughout the entire site, detailed individual data was recorded for all significant trees within the existing site. Where larger numbers of smaller trees were encountered in the survey area these are included as a Group record which includes the approximate height range and maximum Diameter at Breast Height (DBH) of trees within the group, these groups are referred to by group i.e. Group 2 (G2).

4. The surveyed trees are categorized by the standard retention categories as defined in BS5837:2012. Such retention categories seek to inform the design process of trees which may be worthy of consideration for inclusion within the proposed development. All work recommendations relate to trees within the context of the current site layout and usage.

5. Note: the report and schedule recommendations form components of a development survey and are not intended to be used as a specific tree hazard assessment.

6. Trees requiring removal to facilitate the proposed development or which are unsuitable for retention are annotated in red on the Tree Constraints Plan and may be further identified in the work recommendation section of the Tree Schedule.

2. PROPOSED DEVELOPMENT

A. PROPOSED DEVELOPMENT

1. The proposed development layout is for the construction of a social housing scheme within eth site boundaries with associated areas of hard and soft landscaping.

3. TREE PRESERVATION ORDERS AND CONSERVATION AREAS

A. SITE DESCRIPTION

1. The site is not located within a Conservation Area.

2. We have conducted an online check of the Allerdale Council interactive TPO (Tree Preservation Order) map, this does not indicate the presence of any active TPO's within or adjacent to the development site. Reference: https://www.allerdale.gov.uk/en/planning-building-control/planning-policy/conservation-natural-historic-environment/trees-hedges/

3. No TPO's are indicated either within or adjacent to the site. The status of all trees within and adjacent to the site boundaries should be verified to the undertaking of tree works or removals.

4. It should be noted that trees located outside of maintained grounds and not covered by an active TPO or conservation area are subject to the standard Felling License constraints imposed by the Forestry Commission. These regulations restrict the volume of timber which may be removed in a calendar quarter without a felling licence to 5 cubic metres.

5. Hedgerow regulations cover the protection of certain established field boundary hedges.

4. IMPACT OF DEVELOPMENT ON TREE STOCK

A. CURRENT TREE STOCK

1. The current tree stock within the survey boundaries as defined by those trees within 10 metres of the proposed development is comprised as follows.
   Tree species, conditions and retention values are detailed in Appendix 1: Tree Schedule and outlined below.

2. Tree group G1 is a pair of Hybrid Cypress, with the exception of a single lower branch on one tree they are standing deadwood.

3. Tree group G2 is a pair of Elderberries growing beneath the canopy of T1. They are typical of the species with missing bark, exposed wood on main stems and extensive deadwood.

4. Group G3 is a lapsed hedgerow which extends along the Western boundary of the site between the existing fence and the tarmac surfaced footpath. There is a narrow maintained grass strip to the West of the tree locations and a further unsurfaced grass strip to the West of the footpath followed by the surfaced playground of the primary school and a section of school buildings to the North.

5. G3 does not show any signs of recent management as a hedgerow and is a mixture of Common Hawthorn with spreading bushy forms and numerous single / multi stemmed Wych Elms. A number of dead Wych Elms are present indicating that Dutch Elm Disease is active within the group. G3 is semi continuous with gaps in the group and extensive colonisation by ivy particularly in the Northern section of the group.

6. T1 is the only identifiable single tree within the site or its surroundings. It is a multi-stemmed Wych Elm in the early mature age class. It has a low arching crown which is typical of the species, a significant volume of aerial deadwood is present in the lower crown on the East side of the tree. The upper crown leaders have sparse leaf cover which may be indicative of reducing vigour as Autumn leaf loss in surrounding trees was not advanced at the date of our survey. The above factors and the prevalence of disease in the surrounding group means that we cannot assign a retention value of greater than category C and 10+ years to T1.

7. No other trees are located within the zone of the proposed development.

4. IMPACT OF DEVELOPMENT ON TREE STOCK (CONT.)

B. PROPOSED DEVELOPMENT

1. Trees which are within the zone of potential impacts from the proposed development are detailed as follows.

2. Tree groups G1 and G2 are unsuitable for retention in a development due to their current condition and absence of future retention values. They will require removal in the development.

3. The proposed development layout would be in conflict with the boundary group G3. Given the unmanaged nature of the Hawthorns and the limited life spans of the Elms due to continuing disease impact we are of the opinion that G3 does not have a retention value that should influence the layout of the development. G3 makes a limited localised landscape contribution. The removal of G3 and replacement by a suitable planting of mixed native species hedge would provide longer term retention value than the retention of G3.

4. We have reviewed the proposed development layout in relation to tree reference T1; this tree was indicated for retention but in our opinion the relationship between the crown of T1 and the proposed dwellings would not be sustainable. It would also not be possible to construct the proposed footpath in relation to the multiple stems of T1 due to the proximity to the stems and need to match existing footpath levels precluding a ‘no dig’ construction.

5. As noted in section 4a, the presence of disease within the Elms of group G3 combined with deadwood in the lower crown and possible reduced vigour in the leaders of T1 mean that whilst T1 currently makes a localised landscape contribution this is unlikely to be sustained for a significant period of time into maturity.

6. The removal of T1 followed by mitigation through planting within the development would not represent a loss of tree stock with significant retention values.

7. The requirement to remove existing tree stock would eliminate any potential for conflict between surveyed tree stock and the proposed development.

5. SUGGESTED MITIGATION MEASURES

A. GUIDELINES

1. Outline guidance for the protection and retention of trees within the site.
2. Erection of protective fencing is not required within the development.
3. No material storage should take place in protected areas of any retained trees.
4. No mixing of cement-based or other building materials should take place within the root protection area, no storage of fuels should take place within this area.
5. Any tree protection must remain in place until work is completed and there is no risk to the RPAs
6. Once construction has been completed and the landscaping phase is complete the protective fencing may be removed.
7. No specific guidance.

B. PROTECTIVE FENCING

1. The proposed development layout requires the removal of trees, if all tree references are remove then no protective fencing will be required. If any elements of G3 are retained during construction then protective fencing will be constructed of barriers fit for the purpose of excluding construction traffic form root protection areas. Details of appropriate fencing types are included in Appendix 6.
2. Signs will be affixed to every third panel stating ‘Tree Protection Area Keep Out’. See Appendix 7 for example of signage.
3. All fencing will be securely affixed to avoid movement of fencing during the construction phase.
4. If sections of fencing are required then they should be constructed of site fencing of ‘Heras’ type which must be securely braced with additional measures to prevent movement of the fence during construction.

5. SUGGESTED MITIGATION MEASURES (CONTINUED)

C. GENERAL PRINCIPLES TO AVOID DAMAGE TO TREES.

1. Protective fencing installed to prevent mechanical damage to trees adjacent to the development.
2. An indicative list of recommended practices during construction phase is listed below:
3. Once installed tree protection must remain in place and be observed at all times.
4. No fires within 10m of the crown of any retained trees.
5. Soil levels in rooting areas to be retained with minimal level changes, no greater increases than 300mm from existing levels.
6. No cement mixing/washout to take place within 15m of any retained trees.
7. No chemicals, bitumen etc. to be stored within 10m of any retained trees.
8. Any spillage of fuel, chemicals or contaminated water occurring within 2m of the root protection areas to be reported to project supervisor.
9. No additional underground services have been indicated to us at this time but they may be safely routed to avoid rooting zones, if additional services require routing through the root zones of trees for retention then appropriate sub surface or hand trenching methods should be used and guidance sought prior to any works being undertaken. See BS3857:2012.

D. MITIGATION PLANTING.

A specific landscaping plan has not been supplied to us at this time.

The indicative planting included within the proposed layout supplied includes a new hedge along the Western boundary and a significant volume of tree planting within the development.

The use of a native species hedge and suitable tree species / sizes within the landscaping of the site would provide sufficient mitigation for the tree removals required during construction. Given the species composition and retention spans of the current tree stock an appropriately specified landscaping scheme would represent an improvement over the current site.

6. CONCLUSION

1. The proposed development layout will require the removal of trees.

2. The site contains a limited volume of tree stock with all existing trees being located along the Western boundary.

3. Groups G1 and G2 are in poor condition and their removal would not represent the loss of trees with any significant retention prospects.

4. Group G3 will require removal within the development. Given the nature of G3, lapsed hedge with unmanaged Hawthorns and Wych Elms with several dead trees this removal would not represent the loss of tree stock with significant retention values. G3 currently makes a limited landscape contribution but this could be mitigated through the planting of a replacement mixed species hedge

5. T1 will require removal in the development due to above ground conflict with the proposed dwellings and below ground impacts from the proposed footpath construction.

6. The limited size and relatively low retention values of T1 and G3 means their removal could be effectively mitigated by replacement planting within the proposed scheme.

7. If T1 and G3 are removed then no requirements for protective fencing or site management will be created.

7. RECOMMENDATIONS

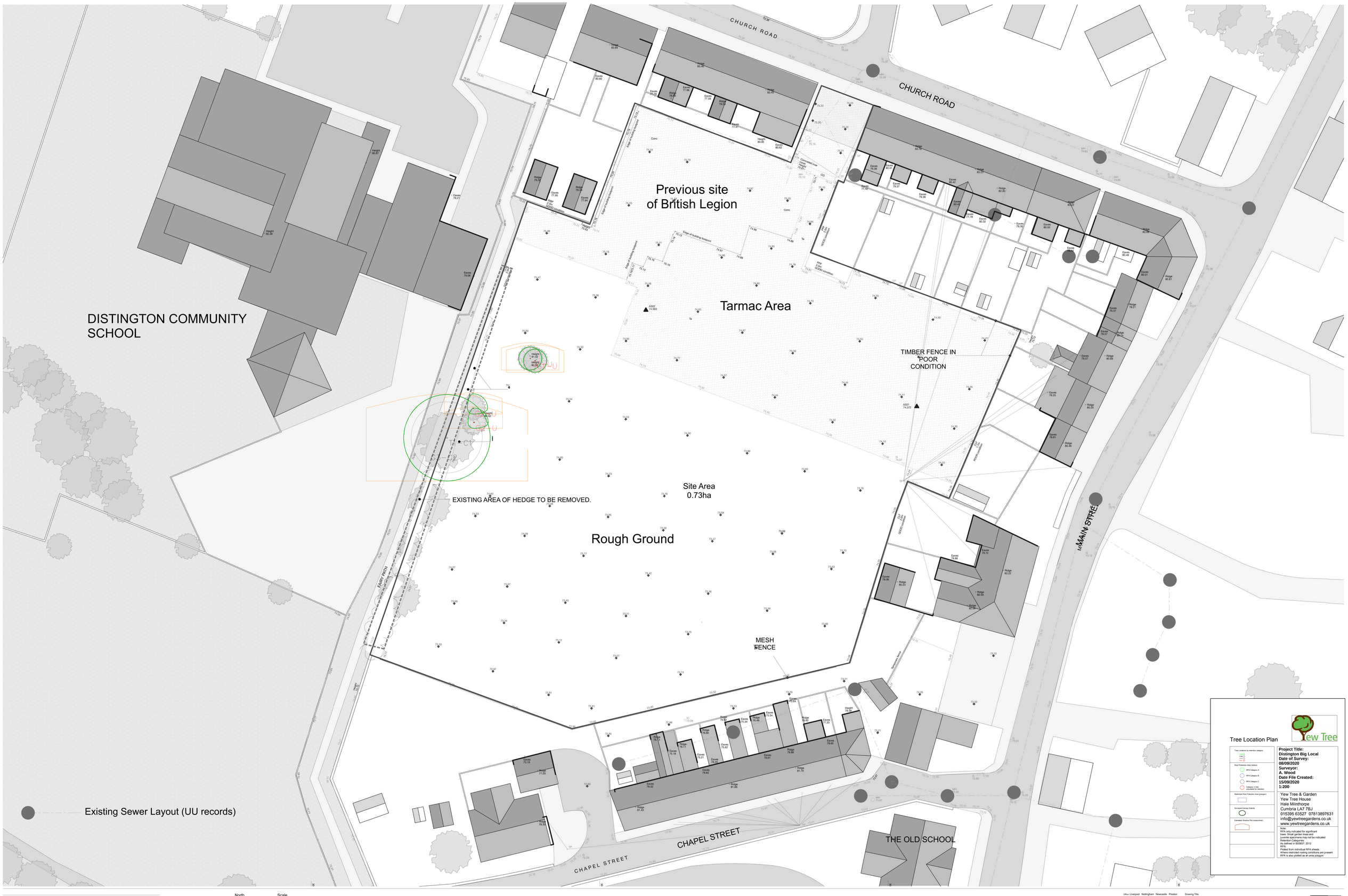
It is recommended that

1. The design and layout of any proposed development reflects the guidance contained within this report both for the management of trees for retention and the protection of same during the proposed development phase and that due consideration is given to the position of any development in relation to retained trees and the removal of trees which are unsuitable for long term retention from the site prior to any development.

Type	Name	Age	DBH	Height	1stB	N	E	S	W	Cond	Life Exp	Comments	Recommendations	RPR m	RPA m^2	Category
G1	Chamaecyparis lawsoniana (Lawson Cypress	EM	165	5	1	2	2	2	2	Dead	<10	Pair of Hybrid Cypress - one tree dead, one tree dead apart from 1 x branch	Unsuitable for retention, will require removal in development	1.98	12.32	U
G2	Sambucus nigra (Elder)	M	150	5	1.5	2.5	2.5	1	1	Poor	<10	Pair of Elderberry unbalconied to E due to T1 and G3. Missing bark and deadwood	Unsuitable for retention, will require removal in development	1.8	10.18	U
G3	Crataegus monogyna (Hawthorn),Ulmus glabra (Wych Elm)	EM	100	8	2	3.5	3.5	3.5	3.5	Fair	20+	Lapsed hedge line, unmanaged with gaps in tree cover. Hawthorns have bushy forms. A number of Wych Elms have died, these trees are distributed along the group. Failures are most likely due to DED. Hawthorn have longer term retention prospects, Wych Elm are likely to experience repeated cycles of infection and dieback	Will require removal in development due to proposed layout / proximity. Wych Elms have limited retention spans irrespective of development. Remove and replant hedge along boundary.	1.2	4.52	C2
T1	Ulmus glabra (Wych Elm)	EM	230	14	3	7.5	7.5	7.5	7.5	Fair	10+	Multi stemmed form with 1 x stem at 340mm measured DBH and 4 x stems at 200 mm. Footpath 2.5m to W then grass strip and surfaced school playground. Lower branches on E side are dead, tree has moderate vigour with sparse leaf cover and dead tips in upper crown, dead branches may be as a result of shading or DED. Presence of dead trees within G3 indicates that T1 may have a reduced lifespan due to DED	Will require removal in development due to location / proximity to dwellings and pathway. Mitigate removal through replacement planting.	6.17	119.61	C1

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2



Tree Location Plan

Yew Tree

Tree Locations by retention category
- Cat A
- Cat B
- Cat C

Root Protection Area (radius)
- RPA Category A
- RPA Category B
- RPA Category C
- Category U tree unsuitable for retention

Restricted Root Protection Area (polygon)

Surveyed Canopy Extents

Estimated Shadow Plot (midsummer)

Project Title:
Distington Big Local
Date of Survey:
08/09/2020
Surveyor:
A. Wood
Date File Created:
15/09/2020
1:200

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Note
RPA only indicated for significant trees. Small garden trees and juvenile specimens may not be indicated
Retention Categories
As defined in BS5837: 2012
RPA's
Plotted from individual RPA sheets.
Where restricted rooting conditions are present RPA is also plotted as an area polygon

Rev.	Date	Description	Drwn.

Note:
Do not scale off this drawing. Do not rely on this drawing for purposes other than the recorded 'Status'. Constructors must be familiar with the client's building asbestos register ahead of facilitating any work contained on this drawing.

North

Scale
0 10 20 30 40m

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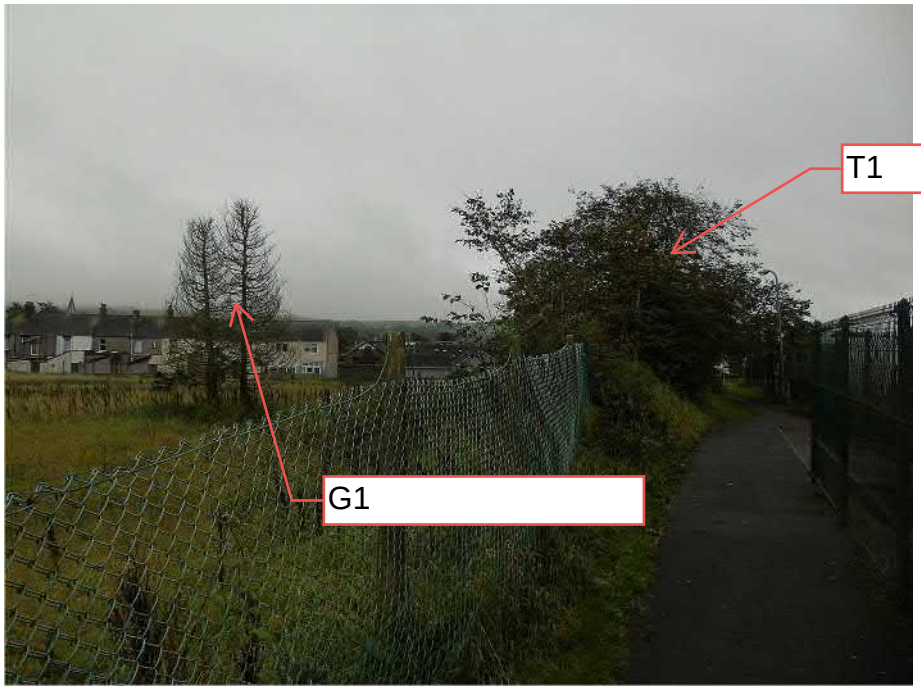
Drawing Title
Existing Site Plan
Project
Distington Big Local
Client
Big Local
Scales @ A0 Date Drawn Check
1:200
Job Number Drg. No - Revision Status
2808 GA_100_02 Planning

Halsall Lloyd Partnership
Architects & Designers

Image date 08/09/2020


T1
G1


Dead Elm
G3

APPENDIX 4

Selected Reference List

The Body Language of Trees by Claus Mattheck & Helge Breloer (1994) London:HMSO.
Diagnosis of ill-health in trees by R.G. Strouts and T.G. Winter. (2000) London:HMSO
Principles of Tree Hazard Assessment and Management by David Lonsdale.(1999) HMSO
BS5837:2012 British Standards Institute
BS3998:2010 British Standards Institute
Trees Their Use, Management, Cultivation and Biology Robert Watson 2006
Tree roots in the built environment (Research for Amenity Trees) (2013) Arboricultural Association
Law of Trees, Forests and Hedges
by Dr. Charles Mynors (Author) Sweet & Maxwell; 2nd Revised edition (14 Dec. 2011)
Assessment of Tree Forks, Assessment of Junctions For Risk Management by Dr. Duncan Slater : Arboricultural Association (Nov 2016)
Collins Tree Guide by Owen Johnson (2006): Harper Collins, London

AA

BB

ENTRANCE TO DEVELOPMENT

CHURCH ROAD

CHURCH ROAD

DISTINGTON COMMUNITY SCHOOL

Shared Parking Court

1 2 3 4 5 6 7 8 29

Shared Parking Court

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Central Square

25 26 27 28

Bin Store

G1 removed

G2 removed

T1 removed

G3 removed

Cycle Stand

ENTRANCE

Patio + Access to Sensory Garden

New mixed species hedge forming boundary

New mixed species hedge forming boundary

Sensory Garden

CC

MAIN STREET

CHAPEL STREET

CHAPEL STREET

THE OLD SCHOOL

2.1m wire fence

2.1m timber fence

1.5 + 0.3m timber fence

900mm Metal Railings

Proposed Area Of Adopted Highway

N

Tree Constraints Plan

Yew Tree

Tree Locations by retention category

Root Protection Area (radius)

RPA Category A

RPA Category B

RPA Category C

Category U tree unsuitable for retention

Restricted Root Protection Area (polygon)

Surveyed Canopy Extents

Estimated Shadow Plot (midsummer)

Tree Protection Fence

Tree / Hedge Removals

Project Title:
Distington Big Local
Date of Survey:
08/09/2020
Surveyor:
A. Wood
Date File Created:
15/09/2020
1:200

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Notes
RPA only indicated for significant trees. Small garden trees and juvenile specimens may not be indicated
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As defined in BS5837: 2012
RPAs
Plotted from individual RPA sheets.
Where restricted rooting conditions are present RPA is also plotted as an area polygon

Rev.	Date	Description	Drwn.

Note:

North

Scale

0 10 20 30 40m

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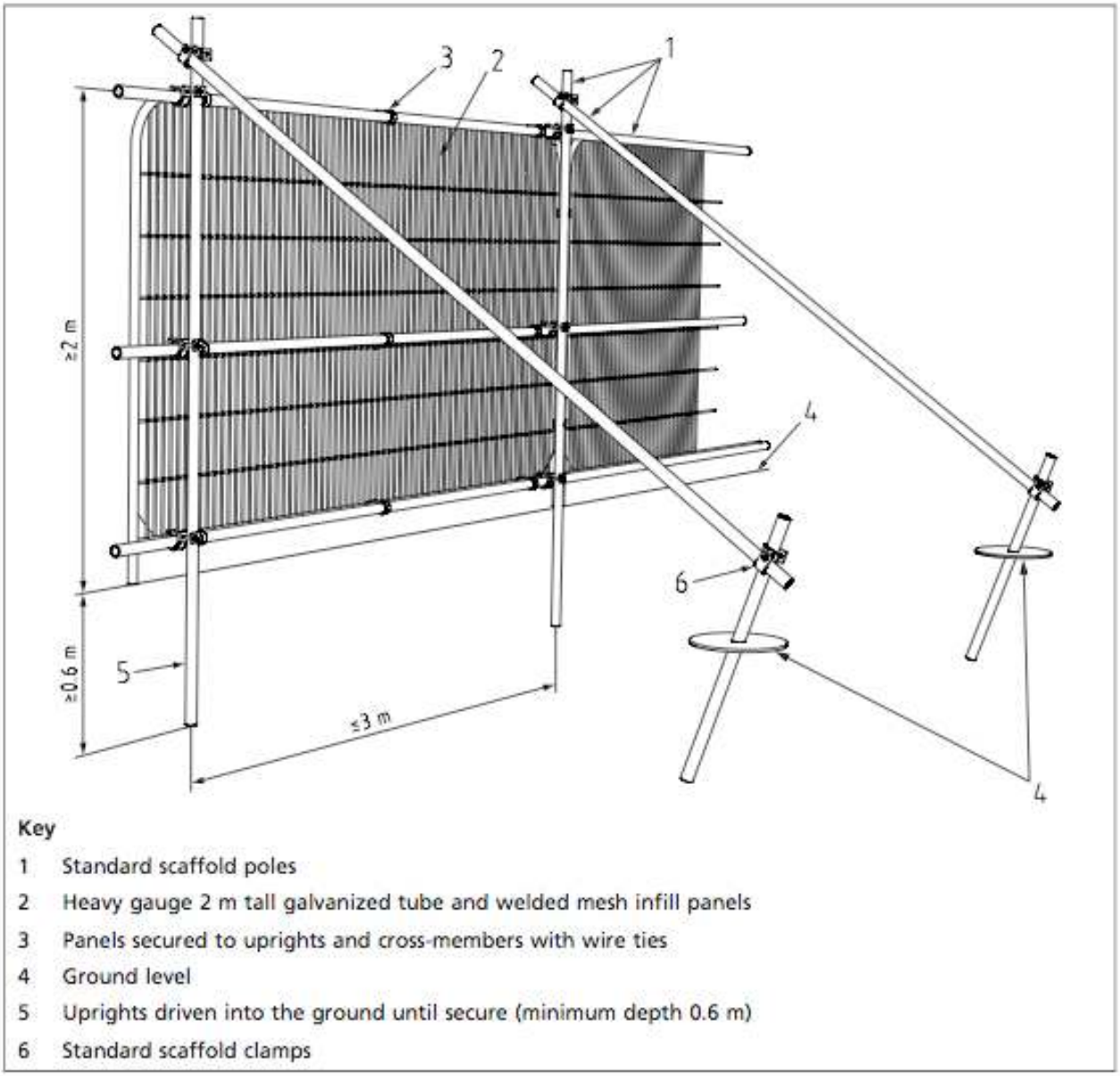
Drawing Title
Proposed Site Plan
Project
Distington Big Local
Client
Big Local
Scale @ A0 Date Drawn Check
1:200
Job Number Drg. No - Revision Status
2808 GA_100_03 Planning

Halsall Lloyd Partnership
ARCHITECTS & DESIGNERS

Appendix 6 - Protective Fencing

Tree protective fencing

Figure 2 **Default specification for protective barrier**



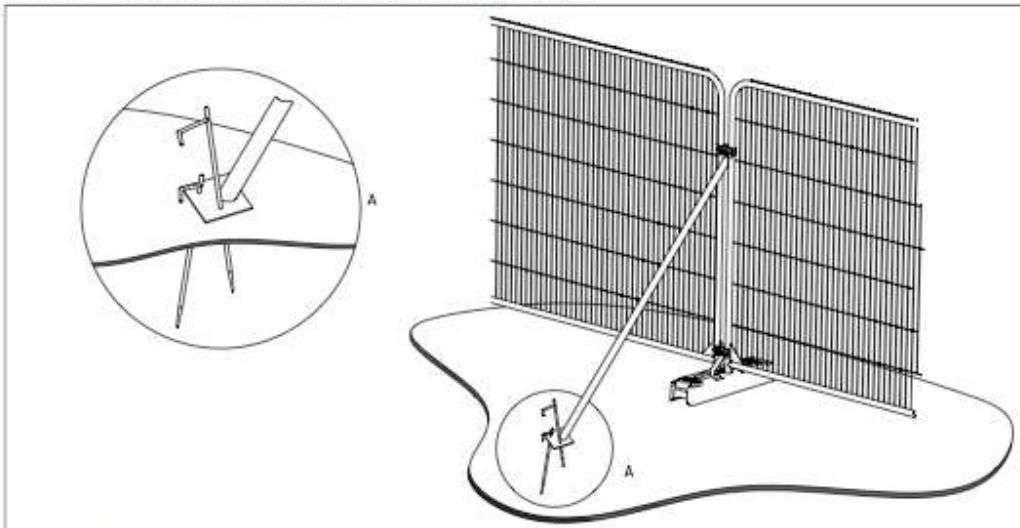
Key

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

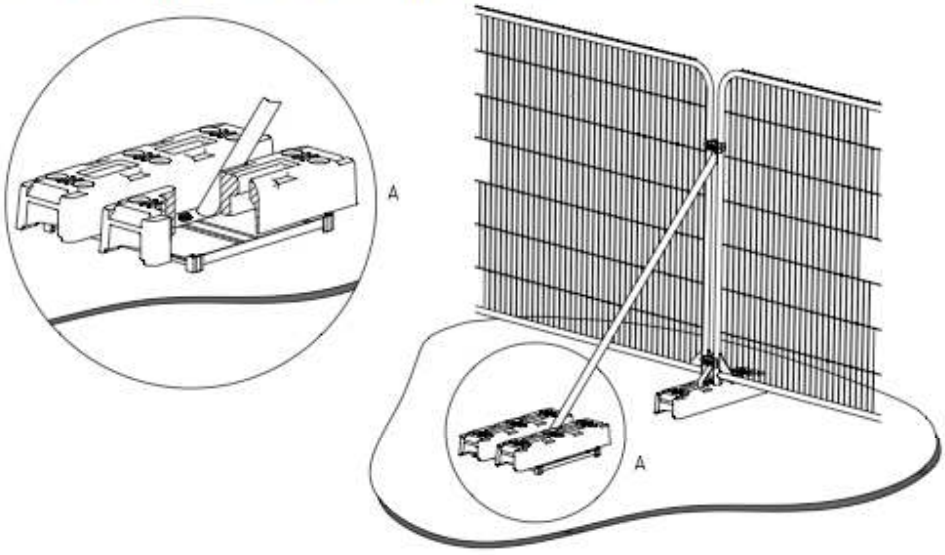
Appendix 6 - Protective Fencing

Tree protective fencing

Figure 3 Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Appendix 7 - Signage

TREE PROTECTION AREA

KEEP OUT!

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL CONSULTANT