

11 APPENDICES

APPENDIX 1 - ARBORICULTURAL SURVEY DATA SHEETS – refer to Tree Constraints Plans 236-T-100 to 104 inclusive.

Site	Site Five, Clywedog Road South	Surveyor	Marianne Dobson	Date	18/08/2022	Weather	dry conditions	Drawing	236/T/100
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The information in the data sheets is correct as of time of survey. Trees are dynamic organisms and their condition can change as a result of changes in their environment, stress factors, physical and man-made conditions.

Tree ref	Species	Height	Stem dia.	Crown spread				Direction and height of lowest branch	Height of crown clearance	Maturity	Structural condition	Physiological condition	Comments on form condition, health and significant defects	BS5837 Tree Quality Category	Radius of RPA	Management recommendations	Estimated remaining contribution
T - individual G - Group W - Woodland H - Hedgerow	Latin name	m	mm	N	S	E	W		m	Young; Semi-mature; Middle Age; Early mature; Mature	Good; Fair; Poor; Veteran	Good; Fair; Poor; Veteran		A, B, C, U	m		less than 10yrs, 10-20, 20-40, 40yrs+
	Common name												(1,2,3)				
TREES - estimated measurements are in <i>italics</i>																	
T1	Quercus robur (English oak)	15	1010	7.5	5.5	6.5	4	not recorded	not recorded	Mature	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh; dense ivy to stem; located at embankment to ditch	B1	12.12		20-40 years
T2	Quercus robur (English oak)	15	480	7.5	5	2	4	not recorded	not recorded	Mature	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh	B1	5.76		20-40 years
T3	Quercus robur (English oak)	13	140	1.5	1.5	1.5	1.5	not recorded	not recorded	Young	Fair	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh	C2	1.68		10-20 years
T4	Quercus robur (English oak)	13	160	2.5	3	2	2	not recorded	not recorded	Young	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh	B2	1.92		20-40 years
T5	Salix caprea (goat willow)	13	130	3.5	3.5	4.5	1	not recorded	not recorded	Young	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh	C2	1.56		10-20 years
T6	Salix caprea (goat willow)	13	140	3.5	3.5	1.5	2.5	not recorded	not recorded	Young	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh	C2	1.68		10-20 years
T7	Quercus robur (English oak)	12	820	2.5	5.5	2.5	3.5	not recorded	not recorded	Mature	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh; bifurcate at ground level; previous breakages to north and south but tree recovering	B3	9.84		20-40 years
T8	Quercus robur (English oak)	12	280	1.5	4	1.5	2.5	not recorded	not recorded	Semi-mature	Good	Good	Tree within dense blackthorn scrub; no access for close	B2	3.36		20-40 years

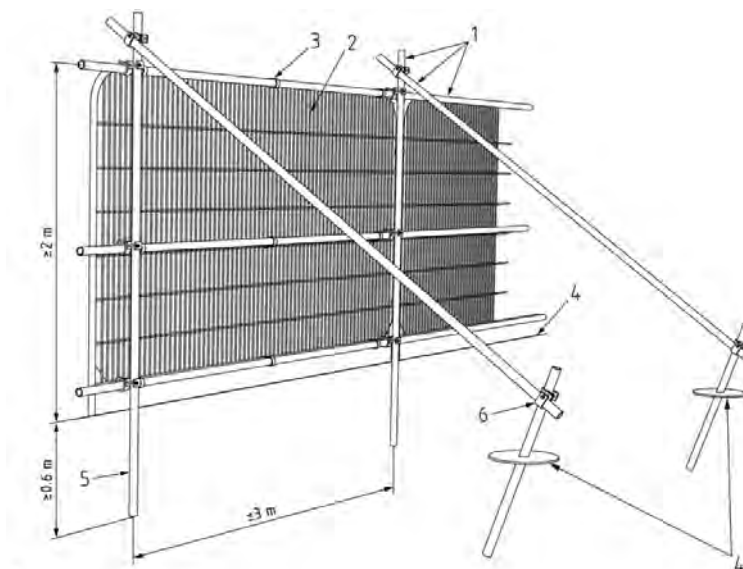
Tree ref	Species	Height	Stem dia.	Crown spread				Direction and height of lowest branch	Height of crown clearance	Maturity	Structural condition	Physiological condition	Comments on form condition, health and significant defects	BSS837 Tree Quality Category	Radius of RPA	Management recommendations	Estimated remaining contribution
T - individual G - Group W - Woodland H - Hedgerow	Latin name	m	mm	N	S	E	W		m	Young; Semi- mature; Middle Age; Early mature; Mature	Good; Fair; Poor; Veteran	Good; Fair; Poor; Veteran		A, B, C, U	m		less than 10yrs, 10-20, 20-40, 40yrs+
	Common name													(1,2,3)			
													inspection; estimated dbh; asymmetric crown				
T9	Quercus robur (English oak)	12	600	5.5	6.5	1.5	6	not recorded	not recorded	Middle Age	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh	A2	7.2		40 years +
T10	Quercus robur (English oak)	12	1250	6.5	8	4	5.5	not recorded	not recorded	Over mature	Good	Good	Tree within dense blackthorn scrub; no access for close inspection; estimated dbh	A2	15		40 years +
T11	Quercus robur (English oak)	12	700	5	6.5	5	2	not recorded	not recorded	Mature	Good	Good	Basal cavity and fungal fruiting body to east side; habitat and biodiversity value	B3	8.4		20-40 years
T12	Quercus robur (English oak)	10	500	2	3.5	1	2.5	not recorded	not recorded	Middle Age	Fair	Fair	Suppression to east and north from neighbouring trees; partially dead adjacent to fence; habitat and biodiversity value	B3	6		20-40 years
T13	Quercus robur (English oak)	8	660	2	3.5	2	4.5	not recorded	not recorded	Mature	Poor	Poor	Tree has died	U	7.92		
T14	Populus balsamifera (Balsam poplar)	18	430	3.5	3.5	3.5	3.5	not recorded	not recorded	Middle Age	Good	Good	Tree to edge of main group of poplar; upright form and good vigour	B2	5.16		20-40 years
T15	Populus balsamifera (Balsam poplar)	16	410	2.5	4.5	3	3.5	not recorded	not recorded	Middle Age	Good	Good	Tree to edge of main group of poplar - sparse branches and high crown	C2	4.92		10-20 years
T16	Quercus cerris (Turkey oak)	14	370	3.5	3.5	3.5	3.5	not recorded	not recorded	Early Mature	Good	Good	Well-formed specimen	A2	4.44		40 years +
T17	Quercus cerris (Turkey oak)	14	360	4.5	3.5	3	3	not recorded	not recorded	Early Mature	Good	Good	Tree of good form and vigour	A2	4.32		40 years +
T18	Populus balsamifera (Balsam poplar)	16	450	3.5	4.5	3	3.5	not recorded	not recorded	Early Mature	Good	Good	Tree of good form and vigour to edge of main group of poplar; transient value	C2	5.4		10-20 years
T19	Populus balsamifera (Balsam poplar)	16	440	3.5	4.5	3.5	3.5	not recorded	not recorded	Early Mature	Good	Good	Tree of good form and vigour to edge of main group of poplar; transient value	C2	5.28		10-20 years
T20	Pinus sylvestris (Scots pine)	13	420	5	5	5	5	not recorded	not recorded	Middle Age	Good	Good	Tree of good form and vigour; balanced crown; minor ivy growth	B2	5.04		20-40 years
T21	Fraxinus excelsior (ash)	13	380	5.5	5	4	6	not recorded	not recorded	Early Mature	Good	Fair	Signs of die back to outer crown	C2	4.56		10-20 years
T22	Quercus robur (English oak)	8	310	4	1.5	2.5	2.5	not recorded	not recorded	Early Mature	Good	Good	Tree to edge of woodland area; ivy growth to stem	B2	3.72		20-40 years

Tree ref	Species	Height	Stem dia.	Crown spread				Direction and height of lowest branch	Height of crown clearance	Maturity	Structural condition	Physiological condition	Comments on form condition, health and significant defects	BSS837 Tree Quality Category	Radius of RPA	Management recommendations	Estimated remaining contribution
T - individual G - Group W - Woodland H - Hedgerow	Latin name	m	mm	N	S	E	W		m	Young; Semi-mature; Middle Age; Early mature; Mature	Good; Fair; Poor; Veteran	Good; Fair; Poor; Veteran		A, B, C, U	m		less than 10yrs, 10-20, 20-40, 40yrs+
	Common name													(1,2,3)			
T23	Fraxinus excelsior (ash)	12	370	4	3	6	4	not recorded	not recorded	Early Mature	Good	Fair	Signs of die back to outer crown	C2	4.44		10-20 years
T24	Quercus robur (English oak)	7	240	4	3	2	4	not recorded	not recorded	Semi-mature	Good	Good	Tree of good form and vigour	A1, A2	2.88		40 years +
T25	Quercus robur (English oak)	5	140	2	2	2	2	not recorded	not recorded	Young	Good	Good	Tree of good form and vigour	B2	1.68		20-40 years
GROUPS																	
G1	Crataegus monogyna (hawthorn)	5		see plan				not recorded	0	Young	Good	Good	Scrubby growth to site boundary	C2	see plan	Group has been removed	10-20 years
	Malus sylvestris (crab apple)																
G2	Betula pendula (silver birch)	12	up to 660	see plan				not recorded	0	Middle Age	Good	Good	Mixed native species tree and scrub with larger specimens of birch, ash and Scot's pine; scrubby understorey providing good screening and habitat; group of moderate value in the landscape	B1, B2	see plan		20-40 years
	Pinus sylvestris (Scots pine)																
	Quercus robur (English oak)																
	Fraxinus excelsior (ash)																
	Acer campestre (field maple)																
	Crataegus monogyna (hawthorn)																
	Malus sylvestris (crab apple)																
G3	Betula pendula (silver birch)	12	up to 660	see plan				not recorded	0	Middle Age	Good	Good	Mixed native species tree and scrub with larger specimens of birch, ash and Scot's pine; scrubby understorey providing good screening and habitat; group of moderate value in the landscape	B1, B2	see plan		20-40 years
	Pinus sylvestris (Scots pine)																
	Quercus robur (English oak)																
	Fraxinus excelsior (ash)																
	Acer campestre (field maple)																
	Crataegus monogyna (hawthorn)																
	Malus sylvestris (crab apple)																
	Salix caprea (goat willow)																
	Sambucus nigra (elder)																
G4	Crataegus monogyna (hawthorn)	12	up to 330	see plan				not recorded	0	Middle Age	Good	Good	Mixed native species scrub with occasional specimens of oak and line of beech to the east, former hedge; dense scrubby understorey providing good screening and habitat; group of moderate value for biodiversity	B3	see plan		20-40 years
	Prunus spinosa (blackthorn)																
	Quercus robur (English oak)																

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	Common name												(1,2,3)				
	Fagus sylvatica (beech)																
G5	Alnus glutinosa (alder)	6	up to 75	see plan				not recorded	0	Young	Good	Good	Stand of single and multi-stemmed alder; self-set group of low value in the landscape	C2	see plan		10-20 years
WOODLAND																	
W1	Quercus robur (English oak)	14	up to 400	see plan				not recorded	not recorded	Mature	Good	Good	Occasional mature trees with dense blackthorn understorey; goat willows to north edge of woodland area	B2	see plan		20-40 years
	Salix caprea (goat willow)																
	Prunus spinosa (blackthorn)																
	Crataegus monogyna (hawthorn)																
W2	Quercus robur (English oak)	12	up to 250	see plan				not recorded	not recorded	Semi-mature	Good	Good	Establishing group of semi-mature to early mature oak with blackthorn and goat willow understorey; good habitat value and potential to develop into woodland of higher category	B2, B3	see plan		20-40 years
	Salix caprea (goat willow)																
	Prunus spinosa (blackthorn)																
	Crataegus monogyna (hawthorn)																
W3	Malus sylvestris (crab apple)	15	up to 200	see plan				not recorded	not recorded	Semi-mature	Good	Good	Establishing group of semi-mature to early mature oak with mixed species understorey; good habitat value and potential to develop into woodland of higher category	B2, B3	see plan		20-40 years
	Salix caprea (goat willow)																
	Fraxinus excelsior (ash)																
	Prunus spinosa (blackthorn)																
	Rosa canina (dog rose)																
	Crataegus monogyna (hawthorn)																
	Corylus avellana (hazel)																
	Quercus robur (English oak)																
	Viburnum opulus (guelder rose)																
W4	Populus balsamifera (Balsam poplar)	20	up to 450	see plan				not recorded	not recorded	Early Mature	Good	Good	Plantation of poplar with understorey of self-set ash and goat willow	B2	see plan		20-40 years
	Salix caprea (goat willow)																
	Fraxinus excelsior (ash)																
W5	Pinus sylvestris (Scots pine)	15	up to 400	see plan				not recorded	not recorded	Mature	Good	Good	Establishing group of semi-mature to early mature oak and Scot's pine with dense blackthorn scrub and occasional apple understorey and planted ornamental species; good habitat value and screening	B2	see plan		20-40 years
	Chamaecyparis lawsoniana (Lawson's cypress)																
	Prunus spinosa (blackthorn)																
	Malus sylvestris (crab apple)																
	Acer saccharinum (Silver maple)																
	Salix caprea (goat willow)																
	Fraxinus excelsior (ash)																
	Quercus robur (English oak)																

APPENDIX 2 – EXAMPLES OF TREE PROTECTION SYSTEMS

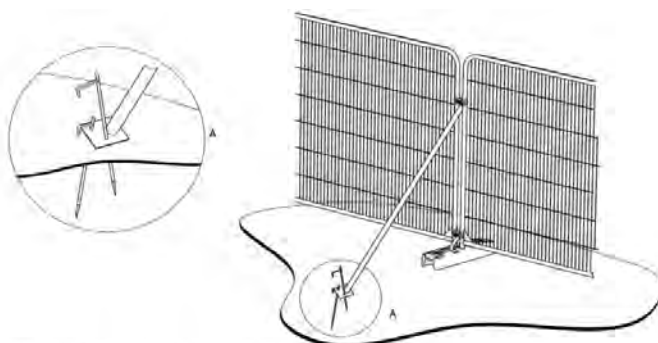
(Extracts taken from BS5837: (2012), “Trees in relation design, demolition and construction – Recommendations”.)



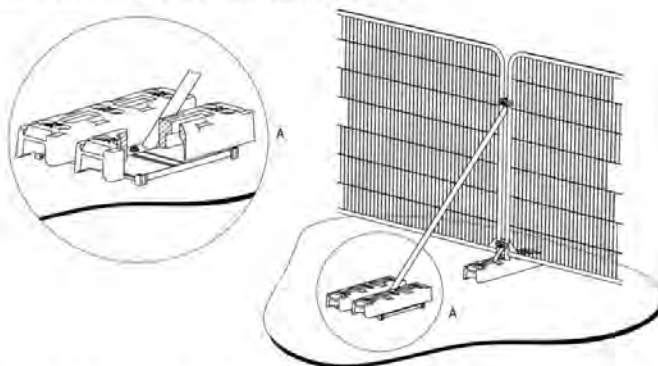
Key

- 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

Default specification for protective barrier



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

APPENDIX 3 – TREE PROTECTION SIGNAGE



TREE PROTECTION FENCING

**THIS FENCE MUST BE MAINTAINED
IN ACCORDANCE WITH THE
APPROVED METHOD STATEMENT
AND DRAWINGS FOR THIS
DEVELOPMENT**



TREE PROTECTION AREA

**ACCESS INTO THIS AREA IS
PROHIBITED FOR THE DURATION OF
THE DEVELOPMENT IN ACCORDANCE
WITH THE APPROVED METHOD
STATEMENT FOR THIS DEVELOPMENT**

APPENDIX 4 3D CELLULAR CONFINEMENT SYSTEM, eg CELLWEB TRP OR EQUIVALENT PRODUCT



Cellweb® TRP is a 3D cellular confinement tree root protection system. The system provides a 'no dig' solution for the construction of new hard surfaces within root protection areas (RPAs). Cellweb® TRP has been designed and independently tested to comply with recommendations made in Arboricultural Practice Note 12 and BS 5837 2012 – Trees in relation to design, demolition and construction.



Cellweb® TRP Key Functions

Cellweb® is a 'no dig' solution which is constructed directly on the existing ground surface. This eliminates the requirement for excavation, preventing root severance.

Cellweb® is a completely porous system allowing continued water permeation and gas exchange between the rooting environment and atmosphere.

Cellweb® spreads point loads, minimising increases in soil compaction within the rooting environment. This maintains an open graded soil structure allowing continued root growth, water, gas and nutrient migration.

The Cellweb® TRP system comprises the following three components

Treetex™ Geotextile. Following minimal ground preparation the Treetex™ is laid onto the existing ground and top soil. This acts as a separation layer, separating the system above from the soil and rooting environment below. Treetex™ performs as a hydrocarbon pollution control measure in accordance with BS5837, holding 1.7lt of oil per square meter.

Cellweb® 3D Cellular Confinement. The Cellweb® is installed on top of the Treetex™ layer. This is fixed to the ground using ten steel J pins per panel. The panels can be cut to the required shape and adjoining panels can be connected using heavy duty staples or cell ties.

4-20mm Clean Angular Stone. The expanded Cellweb® is infilled with a 4-20mm clean angular stone. The confined angular stone locks together to produce a rigid stone mattress, while maintaining air pockets for continued water permeation and gas exchange. The low fines content of the stone prevents the Treetex™ layer from becoming blocked over time.

Which depth of Cellweb® TRP?

The Cellweb® System is provided in four different depths; 200mm, 150mm, 100mm and 75mm. The depth required is determined by the proposed traffic loadings and the site ground conditions. Geosynthetics in house engineering department can provide a free site specific technical recommendation. For free technical and engineering support please contact Geosynthetics Ltd 01455 617139 or the full installation guide can be found on our website www.geosyn.co.uk.

Indicative Cellweb with overfill



Web: www.geosyn.co.uk | Tel: 01455 617139
Fax: 01455 617140 | Email: Sales@geosyn.co.uk



Geosynthetics
Engineered Solutions

APPENDIX 5 – ARBORICULTURAL INSPECTION PROFORMA

Part 1 Project details

RECORD OF ARBORICULTURAL INSPECTION			Inspection by	Marianne Dobson FdSCArb, MArborA, Lantra certified in Professional Tree Inspection		Visit number		Date of visit	
			Signed			Work stage			
			Accompanied by			Activities inspected			
			Signed			Weather conditions			
PROJECT DETAILS									
	Site and address		Drawing title		Drawing Number		Version		
	Planning application reference								
	Tree Preservation Order and/or Conservation Area Details								
	Other Site Constraints								
	<i>Add other information as required</i>								

Part 2 Record of arboricultural inspection – *inspections will generally be undertaken every 4-8 weeks depending on progress of the works and complexity, unless specific visits are programmed to coincide with planned site activities. Planned dates to be entered in the table once programme of works is known.*

Ref	Work stage <i>Add or delete as relevant to specific works</i>	Activity requiring on site attendance by Arboriculturist <i>Add or delete as relevant to specific works</i>	Planned date of inspection	Actual date of inspection	Inspection details and comments	Compliance with AMS	Follow up action required
1	Advance works	Prestart meeting for tree works					
		Marking out for trees to be removed					
		Commencement of tree works					
		Completion of tree works					
		Commencement of installation of tree protection fencing					
		Completion of installation of tree protection fencing					
		Periodic monitoring (depending on timing of specific inspection visits)					
2	Site clearance and demolition	Toolbox talk					
		Removal of above ground structures within the crown spread or RPA of trees to be retained					
		Removal of hard standing and below ground structures or features within the crown spread or RPA of trees to be retained					
		Periodic monitoring (depending on timing of specific inspection visits)					
3	Construction works	Toolbox talk					
		Excavation or works within RPA of trees to be retained					
		Reprofiling of ground levels within RPA of trees to be retained					

Ref	Work stage <i>Add or delete as relevant to specific works</i>	Activity requiring on site attendance by Arboriculturist <i>Add or delete as relevant to specific works</i>	Planned date of inspection	Actual date of inspection	Inspection details and comments	Compliance with AMS	Follow up action required
		Installation of services within RPA of trees to be retained					
		Installation of ground protection below temporary hard standing within RPA of trees to be retained					
		Installation of ground protection below permanent hard standing within RPA of trees to be retained					
		Periodic monitoring (depending on timing of specific inspection visits)					
4	Landscape reinstatement	Toolbox talk					
		Soiling within RPA of trees to be retained					
		Land drainage within RPA of trees to be retained					
		Turfing and Seeding within RPA of trees to be retained					
		Planting within RPA of trees to be retained					
		Periodic monitoring (depending on timing of specific inspection visits)					
5	Completion	Removal of tree protection fencing					
		<i>Add other activities as required relevant to the project and construction activities</i>					

Part 3 Follow up actions identified during inspection

Ref	Follow up action required	Date completed	Comments and / or photographs from site team	Follow up or close out

Part 4 Evidence of arboricultural inspection

	PHOTOGRAPHS TAKEN DURING SITE VISIT	Date

Part 5 Circulation of record of inspection

	RECORD OF INSPECTION ISSUED BY		
	<i>Print name</i>	<i>Signature</i>	<i>Date</i>

RECORD OF SITE INSPECTION ISSUED TO THE FOLLOWING

ISSUE	PROJECT CONTACTS	NAME	CONTACT NUMBER	EMAIL ADDRESS	ROLES AND RESPONSIBILITIES FOR ARBORICULTURAL ISSUES ON SITE – may include:
☐	Project Manager				• Delivery of project and compliance with legal requirements and planning consents relating to the project
☐	Site Construction Manager				• Ensure compliance with the Arboricultural Method Statement, monitor performance of construction site staff and sub-contractors and maintain records to demonstrate compliance with and implementation of the Arboricultural Method Statement; and • Main contact for any Third Party queries and shall keep a record of any Third Party contacts and any follow up actions that may be taken.
☐	Site Manager with responsibility for environmental compliance / Environmental Advisor / or Environmental Clerk of Works				• Delivery of tool box talks for inductions of construction site staff and sub-contractors to ensure arboricultural protection methods are effectively communicated to the site team; • Undertake daily audits of tree protection fencing, ground protection fencing and compliance with the Arboricultural Method Statement; and • Liaises and cooperates with the Arboricultural Consultant at each site inspection and for the duration of the project
☐	Arboricultural Consultant				• Delivery of initial tool box talk for construction site staff to ensure arboricultural protection methods are effectively communicated to the site team; • Undertake site inspections at key work stages identified in the programme and at 8 weekly intervals during the course of the construction project; and • Report to the Local Planning Authority within 3 days of each inspection
☐	Site construction team and sub-contractors	Updated information on arboricultural constraints to be issued to site team as part of regularly site briefings, inductions and tool box talks			• Work to agreed Arboricultural Method Statements, plans and procedures and minimise environment impacts; • Understand the importance of maintaining arboricultural protection on site and maintaining the integrity of the tree protection fencing; • Understand the importance of avoiding pollution, including silt run-off, dust, escape of fuel, chemicals, cement and concrete; • Report all incidents immediately to the Environment Site Manager; and • Monitor the site for potential environmental risks and engage with co-workers to be proactive and ensure method statements, plans and procedures are complied with
☐	Third Party Co-ordinator / Project Co-ordinator / Customer Co-ordinator				• Liaison with Local Planning Authority, stakeholders and Third parties
☐	Arboricultural Contractor				• Undertake tree removal and pruning requirements prior to commencement of construction; • Works to be in accordance with approved planning drawings; and

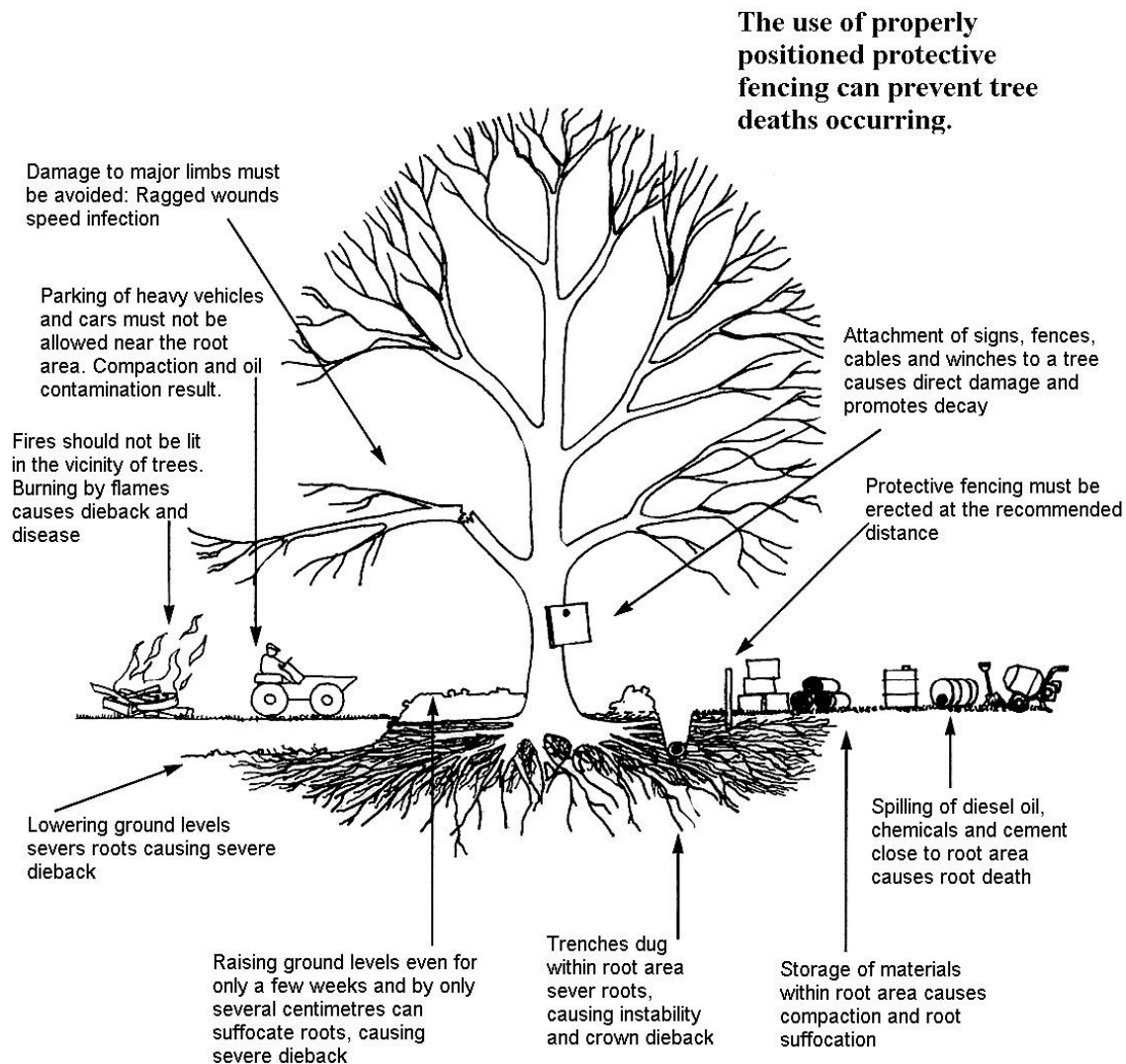
ISSUE	PROJECT CONTACTS	NAME	CONTACT NUMBER	EMAIL ADDRESS	ROLES AND RESPONSIBILITIES FOR ARBORICULTURAL ISSUES ON SITE – may include:
					• Works to be undertaken with regard to environmental and ecological constraints, such as nesting and breeding birds, bats, proximity to watercourse
☐	Ecology Consultant				• Advise on ecological constraints at the site
☐	Local Authority, include Tree Officer details where known				
	<i>Additional contacts</i>				

Part 6 Reporting procedure:

- a) Undertake site inspection and record comments (Part 2);
- b) Discuss any follow up actions immediately with the responsible person on site for environmental compliance and set date for completion of actions (Part 3) where possible rectification works should be undertaken as soon as possible, exceptions to this may include works to protected trees that requires additional consent or work that may require LPA approval before proceeding;
- c) Add evidence of rectification works or follow up actions to inspection record in Part 3;
- d) Add photographic record of site visit inspection in Part 5; and
- e) Issue record of inspection to nominated person for liaison with Local Planning Authority (LPA) or direct issue of record of inspection to LPA, project team and site team as per circulation list.

APPENDIX 6 – COMMON CAUSES OF TREE DEATH POSTER

Common causes of Tree Death



Please use copies of this as an on-site poster for personnel

APPENDIX 7 – TOOL BOX TALK

Toolbox talks: heritage

Working around trees and hedgerows

What?

- trees and hedgerows are an important part of the environment and the countryside and serve as habitats for wildlife. As such they can be protected by legislation enforced by the local authority
- they provide shelter and pathways for insects, amphibians, mammals and birds.

Why?

- **avoid environmental harm and prosecution:** during certain times of the year nesting birds (protected by law against disturbance) may be present in trees and hedgerows
- **avoid prosecution:** it is illegal to cut down or wilfully damage trees protected by a Tree Preservation Order (TPO) or in a conservation area, or to pull up certain countryside hedges except with the consent of the local planning authority (LPA)
- **reduce safety risk:** damaged trees may become unstable and potential hazards. Trees can be damaged by compaction of roots and other damage to the root system, by pollution and through impact by machines.

Questions

How can trees and hedgerows be protected on this site?

What care should be taken when moving plant or storing

and using fuels and other potential pollutants on site?

What must be done if nesting birds are found on site?



Do?

- ✓ check with a line manager before felling any trees or removing any hedgerows to ensure permission has been obtained
- ✓ check for nesting birds and if any are found stop work and contact a line manager **IMMEDIATELY**
- ✓ ask a line manager what protection is required to trees and hedgerows
- ✓ check with a line manager before excavating near to trees and hedgerows
- ✓ ensure plant and machinery are kept out of any excluded areas
- ✓ store all fuels and oils and other potential pollutants away from root systems
- ✓ only hand dig around root systems.

Don't

- ✗ undertake tree felling or hedgerow clearance during the bird nesting season
- ✗ undertake any works to, or near to, trees without authorisation from a line manager
- ✗ track vehicles or plant over tree protection areas
- ✗ store materials, especially fuels and oils under or near trees.

With thanks to the organisations that supported the development of these Toolbox talks

Date issued: January 2016



APPENDIX 8 - GLOSSARY OF TERMS

Maturity	Newly planted - Not fully established and capable of being transplanted or easily replaced
	Young - Establishing, usually with good vigour, still capable of being transplanted or replaced
	Early mature - Established, usually vigorous and increasing in height
	Semi-mature – Established with an overall height in excess of 4 metres and or a stem girth measurement (circumference) of 20 centimetres or larger;
	Middle Age - Trees in the established growth stage of their life with the potential to continue increasing in size;
	Mature - Trees that have reached their ultimate size, given their location and surroundings;
	Over-mature - Fully mature, in last quarter of life expectancy, vigour decreasing
Condition	Good, Fair, Poor. An overall assessment of a tree's physiological and structural state
Veteran	Trees that have biological, cultural or aesthetic value due to age and / or condition. Typically trees that may be living beyond their expected age range for their species
BS 5837 Tree Quality Assessment	The tree quality assessment is based on four categories (A, B, C and U) are used to denote tree quality (A= High, B = Moderate, C = Low, U= Unsuitable for retention).
	Subcategories (1-3) denote the specific function value of the trees and the reasoning behind the allocation of a specific category.
Root Protection Area (RPA)	The theoretical rooting area of a tree as defined in <i>BS5837: 2012</i> . RPA is allocated to ensure that a sufficient area is left undisturbed during development. It is provided as an area (m ²) and as the radius of a circle (m) typically plotted from the centre of the stem.
Estimated Remaining Contribution	The approximate life expectancy as healthy functioning tree and relates to species and the condition of the tree at the time of survey. Long > 40 years Medium 20 – 40 years Short – Medium 10- 20 years Short - Imminent removal <10years
Adventitious or Epicormic shoots	Small branches that grow in clusters around the stem or base of a tree in an uncharacteristic fashion for a normally healthy tree, usually at the site of pruning wounds or as an indicator of stress
Bifurcate	Divided into two branches or forks
Buckling	Deformation of a structure subjected to a bending load Buttress zone, irreversible.
Chalara – Ash dieback	Chalara dieback of ash, also known as Chalara or ash dieback, is a disease of ash trees caused by a fungus called <i>Hymenoscyphus fraxineus</i>
Decurrent	The tree crown is borne on several major wide spreading limbs of similar size
Defect	A feature which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment
Dieback	A condition in which a tree or shrub begins to die from the tip of its leaves or roots backwards, owing to disease or an unfavourable environment.
Disease	A malfunction or destruction of tissues usually caused by pathogens.
Dominance	The tendency for a leading shoot to grow faster than the lateral shoots; also a tree that maintains a taller crown than its neighbours.

Excurrent	A well-defined central main stem to the crown, bearing branches which are limited in their length, diameter and secondary branching.
Flush-cut	A pruning cut which removes part of the branch bark ridge and or branch-collar.
Girdling root	A root which circles and constricts the stem.
Hazard beam	An upward curving part of a tree in which strong internal stresses may occur without being reduced by adaptive growth; prone to longitudinal splitting or may form a banana shaped crack.
Included bark (ingrown bark)	Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact.
Infection	The establishment of a parasitic micro-organism in the tissues of a tree or other organism.
Lopping	Removal of large branches from a tree that does not follow natural target pruning practices.
Natural target pruning	The siting of pruning cuts at the branch bark ridge with a cut of minimal surface area to allow quicker healing of the wound.
Occlusion	The process of continual radial growth and healing of a wound which is progressively closed by the formation of new wood and bark around it.
Plant pathogen	Infectious organism that causes a disease on a plant. Although relatives of some plant pathogens are human or animal pathogens, most plant pathogens only harm plants. Plants are rarely cured of disease once infected.
Pollarding	The removal of the tree canopy, back to the stem or primary branches. The management regime is usually repeated as part of a regular management programme.
Primary branch	A major branch, of greater order than secondary branches.
Pruning	The removal or cutting back of lesser branches or twigs.
Reactive Growth/ Reaction Wood	Production of woody tissue in response to mechanical stresses.
Root-collar	The transitional area between the stem/s and roots prior to development of a root flare or buttress.
Secondary branch	A branch, of lower order than primary branch.
Veteran tree	An aged old specimen that has features which increase its value as habitat for wildlife (dead wood, cavities etc.) irrespective of its chronological age and that is of interest biologically, culturally or aesthetically because of its age, size or condition, is usually of advanced age.
Windthrow	The fall of a tree in high wind, blowing over of a tree at its roots.
Wound wood	Wood developing in response to a wound which gradually heals and occludes the wound