

Combined Arboricultural Impact
Assessment/ Method Statement
Land West of Mount Road
Rhigos
CF44 9YS

REVISION I



Conducted By: Ben Clark TechArborA

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Introduction

This survey was carried out by Ben Clark, Arboricultural Consultant, and Director at Tree Check Arboriculture Ltd. with over 9 years' experience in the arboriculture industry and holding the following qualifications:

- Level 4 Diploma in Arboriculture
- BSc. Geology (University of Southampton)
- LANTRA Professional Tree Inspection Certificate (PTI)
- Various NPTC qualifications in tree surgery.

Ben is a technician member of the arboricultural association and attends regular training and seminars to remain up to date with current arboricultural practices.

The methodology of this report is based on the recommendations provided by the British Standards Institute document BS5837: Trees in Relation to Design, Demolition and Construction – Recommendations, as well as other recommendations provided by institutions such as the Arboral Association.

Brief

Tree Check has been instructed by Lewis Taylor of Lighthouse Development Consulting on behalf of REWE II LTd. to carry out a tree survey and categorisation at Land West of Mount Road, Rhigos. Based on the findings, we were also instructed to carry out an impact assessment to consider proposed development on site, as well as produce a method statement to protect retained trees

The following information was available:

- Drawings provided by Lighthouse Development.

It should be noted that all of the trees recorded in this report were shown on the topographical plan, and their locations in the Tree Constraints Plan are based on GPS and should be taken as indicative only. All locations and distances should be checked on site.

The site was visited on the 23-Jan-2025 during overcast but dry weather conditions considered favourable for this type of survey.

Scope

- The purpose of this report is to provide a recommended method statement aimed at avoiding, or minimising negative impact to trees by proposed development.
- Trees have only received a cursory inspection and this report does not constitute a full tree condition/safety survey. Ongoing inspection should proceed as per the landowner's tree management plan.
- A tree constraints plan has been produced to indicate the locations of trees and the BS5837 calculated rooting areas. in relation to the site.
- The intended purpose of this report is that it is used as an aid to assess impact on, and constraints caused by trees when designing the layout of the site.
- Where trees have been noted to be hazardous in terms of unacceptable third-party risk this has been noted and recommendations given.
- General management recommendations have been given where appropriate.
- The inspection was carried out at ground level from inside the site and along adjacent public roads trees were not climbed and no internal decay detection was used. It is our policy to recommend further investigation with decay detection equipment where features observed during visual inspection warrant such action.
- All heights of trees were estimated from ground level.
- Branch spread was measured from the base of the trees in four cardinal directions using a laser tape measure.
- Stem Diameter was measured at 1.5m above ground level using a diameter tape measure.

- Data on the observed structural condition of the tree has been entered, e.g., collapsing, leaning and the presence of any observed decay or physical defect has been noted.
- Soil analysis has not been carried out.

Interpretation

BS Categories

Trees have been assigned retention categories in accordance with BS5837. These are as follows:

Category A- Trees with a high retention value which are either arboriculturally important, important within the landscape, or culturally/ecologically important.

Category B- Trees with a moderate retention value i.e. they are good examples of their species, provide some notable amenity value to the area, or provide significant ecological or cultural value.

Category C- Trees with a low retention value. Including trees with defects which reduce their amenity value or expected lifespan but not to the extent that they cannot be realistically retained within the development.

Category U- Trees of which retention is considered unrealistic within the context of the development due to poor condition and low life expectancy.

See [Table I](#) in the appendices of this report for more information on the allocation of categories and subcategories.

Tree Age Ratings

Y- Young trees in their early stage of growth, have undergone minimal secondary thickening and are still primarily composed of active tissue.

EM- Early mature trees that have started to show characteristics of maturity such more developed crowns and increased stem thickness.

M- Mature fully developed trees.

OM- Over mature trees that are starting to show signs of decline.

A- Ancient trees that have reached a notably old age for their species and are therefore considered to be important.

V- Veteran trees with notable features such as wounds, cavities, cracks, etc. that provide significant habitat value. These are usually older trees.

Root Protection Areas (RPA's)

Root Protection areas have been calculated according to BS5837 and represent the estimated minimum rooting area required by the tree to carry out its functions.

Excavation in this area can cause physiological or structural harm to a tree and the movement of machinery or personnel over this area can cause soil compaction and in turn, physiological harm to the tree.

There will be excavation works going on in the RPA's of several trees. The methodology of this works will be stated in this method statement.

Remaining Contribution

Remaining contribution has been estimated based on the trees overall condition, approximate age, and the life expectancy of the species in question. This is based on the assumption that new factors are not introduced that will affect the trees life expectancy, such as pathogens, climate factors or other biotic or abiotic influences.

Terminology

See annex v for a glossary of the terms commonly used in tree reports.

Trees and groups are numbered with the following prefixes:

- **T-** individual trees.
- **G-** groups of trees with similar characteristics and rooting areas.
- **H-** Hedgerows.
- **W-** woodland groups, designated as such due to the presence of woodland features such as natural regeneration,

Tree Schedule

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
G1	351	Common hawthorn (<i>Crataegus monogyna</i>)	6	100	2.5	2.5	2.5	2.5	1	1.5	Unremarkable trees outside of site but within potential influencing distance. Observed at a distance from within site, all dimensions estimated.	No action required at this time.	M	20-40	C2	4	1.2	/
G2	358 - 359	Common hawthorn (<i>Crataegus monogyna</i>)	9	210	2	2	2	2	5	5	Two hedgerow trees of average form, isolated by the loss of surrounding hedgerow.	No action required at this time.	EM	20-40	C2	19	2.5	/
G3	363 - 364	Common hawthorn (<i>Crataegus monogyna</i>) Blackthorn (<i>Prunus spinosa</i>)	8	200	1.5	1.5	1.5	1.5	1.5	1.5	Part of the sporadic, bank and ditch hedgerow adjacent to the site entrance track. Ground is compacted 1.5m to the west due to farm traffic, rooting area is likely restricted beyond this point.	No action required at this time.	EM	20-40	C2	18	2.4	/
G4	367 - 368	Common hawthorn (<i>Crataegus monogyna</i>)	4	140	1	1	1	1	1.5	1.5	Two trees of average form. Part of an old bank hedgerow. A limb on the eastern side of tree with tag 367 has failed into the neighbouring field.	Remove failed limb from tree with tag 367.	EM	20-40	C2	8	1.7	/
G5	N/A	Pedunculate oak (<i>Quercus robur</i>)	12	220	4	4	4	4	5	5	Three trees of average form at the side boundary. Rooting areas separated from the rest of site by a watercourse.	No action required at this time.	EM	20-40	B2	21	2.6	/
G6	N/A	Goat willow (<i>Salix caprea</i>) Common dogwood (<i>Cornus sanguinea</i>)	8	80	4	4	4	4	0	0	Unremarkable scrubby growth at the site boundary.	No action required at this time.	Y	40+	C2	2	1.0	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
G7	378 - 379	Silver birch (<i>Betula pendula</i>) Common hawthorn (<i>Crataegus monogyna</i>) Hazel (<i>Corylus avellana</i>) Pedunculate oak (<i>Quercus robur</i>) Goat willow (<i>Salix caprea</i>)	18	700	8	8	8	8	1.5	1.5	Standard trees of reasonable form developed from an unmaintained bank and ditch hedgerow. Numerous failed primary branches resting in the water course. Rooting areas separated from site by the water course.	Target prune failed branches to the branch collar and remove arisings from the water course.	M	20-40	B2,3	221	8.4	/
G8	N/A	Pedunculate oak (<i>Quercus robur</i>) Goat willow (<i>Salix caprea</i>) Silver birch (<i>Betula pendula</i>) Common alder (<i>Alnus glutinosa</i>)	18	400	4.5	4.5	4.5	4.5	1.5	1.5	Trees of average form outside of site but within potential influencing distance and overhanging the northern site boundary. Providing screening between site and the road.	No action required at this time.	EM	20-40	B2	72	4.8	/
G9	N/A	Common ash (<i>Fraxinus excelsior</i>) Goat willow (<i>Salix caprea</i>)	8	200	3	3	3	3	1.5	1.5	Trees outside of site but within potential influencing distance. Rooting areas separated from site by a water course. Observed at a distance from within site, all dimensions estimated.	No action required at this time.	EM	20-40	C2	18	2.4	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
G10	N/A	Common alder (<i>Alnus glutinosa</i>) Pedunculate oak (<i>Quercus robur</i>) Goat willow (<i>Salix caprea</i>) Silver birch (<i>Betula pendula</i>)	18	250	4.5	4.5	4.5	4.5	1.5	1.5	Trees of average form outside of site but within potential influencing distance and overhanging the northern site boundary. Providing screening between site and the road. Trees are situated on the far side of a water course which segregates their rooting area from site.	No action required at this time.	EM	20-40	B2	28	3.0	/
G11	N/A	Common ash (<i>Fraxinus excelsior</i>) Goat willow (<i>Salix caprea</i>) Silver birch (<i>Betula pendula</i>)	18	350	4	4	4	4	2	4	Trees outside of site but within potential influencing distance. Observed at a distance from within site. All dimensions estimated. Ash tree with Ash Dieback Disease (<i>Hymenoscyphus fraxineus</i>) health stage 3 observed, location indicated on the attached tree constraints plan. Multiple failed primary branches and stems observed, locations indicated on the attached tree constraints plan.	If trees are within the client's ownership, fell the infected ash tree and remove failed stems and branches.	EM	20-40	B2	55	4.2	/
G12	N/A	Goat willow (<i>Salix caprea</i>) Silver birch (<i>Betula pendula</i>)	13	300	5	5	5	5	1	1	Trees outside of site but within potential influencing distance. Observed at a distance from within site, all dimensions estimated. Goat willow with a failed limb resting on the boundary fence observed. Location annotated on the attached tree constraints plan.	Remove the failed limb as annotated on the attached tree constraints plan.	EM	20-40	B2	40	3.6	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
G13	N/A	Common ash (<i>Fraxinus excelsior</i>) Silver birch (<i>Betula pendula</i>) Goat willow (<i>Salix caprea</i>) Lodgepole pine (<i>Pinus contorta</i>)	18	400	5	5	5	5	0	1	Trees situated outside of site but within potential influencing distance. Observed at a distance from within site, all dimensions estimated. Provides good screening between site and the adjacent road.	No action required at this time.	EM	20-40	B2	72	4.8	/
H1	N/A	Common beech (<i>Fagus sylvatica</i>)	2.5	150	0.5	0.5	0.5	0.5	0	0	Hedgerow of average form providing screening between the Farmhouse and the adjacent road.	No action required at this time.	EM	20-40	C2	10	1.8	/
H2	N/A	Leyland cypress (<i>X Cuprocyparis leylandii</i>)	2.5	100	1	1	1	1	0	0	Unremarkable non-native hedge of average form providing screening between the farmhouse and the rest of site. Maintained at 2.5m.	Continue to box cut annually outside of nesting bird season.	EM	20-40	C2	4	1.2	/
W1	N/A	Common ash (<i>Fraxinus excelsior</i>) Sitka spruce (<i>Picea sitchensis</i>) Grey alder (<i>Alnus incana</i>) Hybrid larch (<i>Larix x eurolepis</i>) Scots pine (<i>Pinus sylvestris</i>) Goat willow (<i>Salix caprea</i>)	20	400	5	5	5	5	1	1.5	Trees outside of site but within potential influencing distance. Observed at a distance from within site. All dimensions estimated.	No action required at this time.	EM	20-40	B2,3	72	4.8	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T1	351	Blackthorn (<i>Prunus spinosa</i>)	6	100	2.5	2.5	2.5	2.5	1	1.5	A somewhat stunted tree in an exposed position, previously part of a banked hedgerow, plotted as individual trees in this area where is has become sporadic with large gaps between specimens.	No action required at this time.	M	20-40	C2	4	1.2	/
T2	352	Blackthorn (<i>Prunus spinosa</i>)	6	100	2.5	2.5	2.5	2.5	1	1.5	A somewhat stunted, multi-stemmed tree in an exposed position, previously part of a banked hedgerow, plotted as individual trees in this area where is has become sporadic with large gaps between specimens.	No action required at this time.	M	20-40	C2	4	1.2	/
T3	353	Blackthorn (<i>Prunus spinosa</i>)	5	80	0.5	0.5	0.5	0.5	1.5	1.5	An unremarkable tree, subordinate to T2.	No action required at this time.	EM	20-40	C2	2	1.0	/
T4	354	Common alder (<i>Alnus glutinosa</i>)	5	90	2	2	2	2	1.5	1.5	A twin stemmed tree of below average form, previously part of the now sporadic hedgerow. Extensive stem decay noted between ground level and 2m. Currently very low target occupancy	If the target occupancy is to increase throughout the development, coppice to 300mm above ground level leaving a clean 20° finishing cut. There is scope for RPA reduction following such works.	EM	10-20	C2	3	1.1	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T5	355	Common hawthorn (<i>Crataegus monogyna</i>)	6	180	2.5	2.5	2.5	2.5	1	1.5	Multi-stemmed tree with partial root plate failure. Currently very low target occupancy.	If the target occupancy is to increase throughout the development, coppice to 300mm above ground level leaving a clean 20° finishing cut. There is scope for RPA reduction following such works.	M	20-40	C2	14	2.2	/
T6	255	Common beech (<i>Fagus sylvatica</i>)	15	590	4	4	4	4	1.5	1.5	A tree of reasonably good form at the site boundary. The rooting area is separated from the rest of site by a drainage ditch 0.7m east of the base.	No action required at this time.	M	40+	B2	157	7.1	1
T7	357	Crab apple (<i>Malus sylvestris</i>)	6	450	2	4	2	0.5	0	0	Stem failure at 1.5m above ground level. Remaining lower stem is extensively decayed with coalescing internal decay cavities observed.	If proposed development permits, retain the lower stem for habitat value and remove the failed section from site.	M	<10	U	0	0.0	2
T8	360	Common hawthorn (<i>Crataegus monogyna</i>)	5	150	0.5	0.5	0.5	0.5	0	0	Standing dead and extensively decayed tree with limited crown intact.	Fell to ground level.	EM	<10	U	0	0.0	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T9	352	Blackthorn (<i>Prunus spinosa</i>)	6	100	2.5	2.5	2.5	2.5	1	1.5	Multi-stemmed tree adjacent to the site access road, previously part of a banked hedgerow, plotted as individual trees in this area where it has become sporadic with large gaps between specimens. Ground is compacted 0.5m to the west due to farm traffic, rooting area is likely restricted beyond this point.	No action required at this time.	M	20-40	C2	4	1.2	3
T10	362	Blackthorn (<i>Prunus spinosa</i>)	6	100	0.5	0.5	0.5	0.5	1.5	1.5	Extensively decayed base. Currently very low target occupancy.	If target occupancy is to increase, fell to ground level.	EM	20-40	U	0	0.0	2
T11	365	Crab apple (<i>Malus sylvestris</i>)	13	390	2.5	4	5	1.5	1	1.5	Extensively decayed base indicated by basic resonance testing with a sounding hammer. Basel decay cavity affecting over fifty percent of the circumference. Currently very low target occupancy	If the target occupancy is to increase during development fell to ground level.	M	<10	U	0	0.0	/
T12	366	Common hawthorn (<i>Crataegus monogyna</i>)	3	80	0.5	0.5	0.5	0.5	1.5	1.5	An unremarkable tree, subordinate to T11.	No action required at this time.	EM	20-40	C2	2	1.0	/
T13	369	Silver birch (<i>Betula pendula</i>)	12	400	4	4	2.5	2.5	5	5	A somewhat stunted tree of average form in an exposed. Part of the old, banked hedgerow.	No action required at this time.	M	20-40	B2	72	4.8	/
T14	370	Common hawthorn (<i>Crataegus monogyna</i>)	5	120	2.5	1	1	1	1	1	A somewhat stunted tree of average form in an exposed. Part of the old, banked hedgerow.	No action required at this time.	M	20-40	C2	6	1.4	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T15	N/A	Goat willow (<i>Salix caprea</i>)	13	300	8	5	5	0.5	0	0	A twin stemmed tree outside of site but within potential influencing distance. Northern stem has failed leaving southern stem leaning towards site and poorly supported.	Fell to ground level.	M	<10	U	0	0.0	4
T16	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	250	4	4	4	4	2	5	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge.	No action required at this time.	EM	40+	B2	28	3.0	/
T17	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	350	4	4	4	4	2	5	A tree of reasonably good form outside of site, but within potential influencing distance. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Observed at a distance from within site. All dimensions estimated.	No action required at this time.	EM	40+	B2	55	4.2	/
T18	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	500	4	4	4	4	2	5	A tree of reasonably good form outside of site, but within potential influencing distance. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Observed at a distance from within site. All dimensions estimated.	No action required at this time.	EM	40+	B2	113	6.0	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T19	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	600	7	6	6	6	2	5	A tree of reasonably good form outside of site, but within potential influencing distance. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Observed at a distance from within site. All dimensions estimated.	No action required at this time.	EM	40+	B2	162	7.2	/
T20	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	320	3	4	3	2	2	5	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge.	No action required at this time.	EM	40+	B2	46	3.8	/
T21	371	Pedunculate oak (<i>Quercus robur</i>)	4	250	4	4	2	0	0	0	A tree of poor form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Leaning heavily towards site with extensive decay on the tension side of the stem. Currently very low target occupancy.	If target occupancy is to increase through the course of the development, fell to ground level.	EM	<10	U	0	0.0	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T22	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	300	4	4	4	1.5	2	5	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Fractured and partially failed primary branch resting in the water course.	Target prune the partially failed branch back to the branch collar.	EM	40+	B2	40	3.6	/
T23	N/A	Pedunculate oak (<i>Quercus robur</i>)	8	250	2	4	2	4	2	5	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge.	No action required at this time.	EM	40+	B2	28	3.0	/
T24	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	750	4	7	7	7	0	0	A tree of reasonably good form outside of site, but within potential influencing distance and overhanging site with branches resting on the ground on the eastern side of the water course. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Observed at a distance from within site. All dimensions estimated.	No action required at this time.	EM	40+	B2	254	9.0	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T25	372	Silver birch (<i>Betula pendula</i>)	15	350	2	8	2	2	1	3	Tree originating outside of site but leaning at an acute angle into site. Basal decay cavity effecting 20% of the circumference at the base. Currently very low target occupancy.	If target occupancy is to increase through the course of development, reduce eastern crown by 2m and reinspect at 18 month intervals to monitor decay.	EM	10-20	C2	55	4.2	/
T26	N/A	Goat willow (<i>Salix caprea</i>)	8	80	1	1	1	1	1.5	1.5	Tree situated within the watercourse. Previously coppiced at just below 1.5m above ground level, a new crown has formed of poorly attached regrowth shoots from the extensively decayed stem. Very low target occupancy.	No action required at this time.	M	10-20	C2	2	1.0	/
T27	373	Silver birch (<i>Betula pendula</i>)	10	250	1.5	1.5	1.5	1.5	0	0	Twin stemmed specimen. Northern stem has failed into site. Remaining southern stem has 50% crown dieback and is extensively decayed. Currently very low target occupancy.	If the target occupancy is to increase throughout the development, fell to ground level.	EM	<10	U	0	0.0	/
T28	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	800	8	8	8	8	2	5	A tree of reasonably good form outside of site, but within potential influencing distance. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Observed at a distance from within site. All dimensions estimated.	No action required at this time.	EM	40+	B2	289	9.6	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T29	N/A	Silver birch (<i>Betula pendula</i>)	15	350	4	4	4	1.5	2	5	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Fractured and partially failed primary branches resting in the water course.	Target prune the partially failed branches back to the branch collar.	EM	40+	B2	55	4.2	/
T30	N/A	Silver birch (<i>Betula pendula</i>)	15	350	4	4	4	2.5	2	5	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge. Fractured and partially failed primary branches resting in the water course.	Target prune the partially failed branches back to the branch collar.	EM	40+	B2	55	4.2	/
T31	373	Pedunculate oak (<i>Quercus robur</i>)	15	700	8	8	8	8	1	1.5	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a drainage ditch. Originating from now defunct bank and ditch hedge.	No action required at this time.	EM	40+	B2	221	8.4	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T32	375	Silver birch (<i>Betula pendula</i>)	15	240	3	8	1	0	1	3	Tree originating at the site boundary but leaning at an acute angle into site. Previously twin stemmed but the western stem has failed and is resting in the water course. Subordinate to the larger neighbouring oak tree which provides significant wind dampening to the remaining stem.	Remove the failed stem from the water course.	EM	10-20	C2	26	2.9	/
T33	372	Pedunculate oak (<i>Quercus robur</i>)	13	240	3	3	3	2	1.5	2	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a water course.	No action required at this time.	EM	40+	B2	26	2.9	/
T34	377	Silver birch (<i>Betula pendula</i>)	13	240	3	3	3	2	1.5	2	A tree of reasonably good form at the edge of site. Separated from the rest of the site by a water course.	No action required at this time.	EM	40+	B2	26	2.9	/
T35	379	Common alder (<i>Alnus glutinosa</i>)	15	940	5	5	5	5	1.5	3	A triple stemmed tree with developing veteran features including numerous decay cavities throughout the crown. Extensive basal swelling observed, likely in response to internal decay. Currently very low target occupancy.	If target occupancy is to increase detailed investigation into decay will be required.	OM	20-40	B2,3	399	11.3	/
T36	381	Goat willow (<i>Salix caprea</i>)	7	200	0	3	6	3	0	0	Tree originating outside of site but failed into site and resting on the boundary fence.	Cut back to the boundary fence and remove arisings from site.	EM	<10	U	0	0.0	/
T37	N/A	Goat willow (<i>Salix caprea</i>)	13	250	4	4	4	4	1.5	3	Tree of average form. Shared canopy with G12 but situated on the near side of the water course.	No action required at this time.	EM	20-40	C2	28	3.0	/

Ref	Tag	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Lowest Branch (m)	Survey Notes	Recommendations	Life Stage	Life Expectancy (years)	Retention Category	RPA Area (m ²)	RPA Radius (m)	Photo
					N	E	S	W										
T38	N/A	Goat willow (<i>Salix caprea</i>)	8	100	1	2	2	2	1.5	3	Tree of average form. Shared canopy with G12 but situated on the near side of the water course.	No action required at this time.	EM	20-40	C2	4	1.2	/
T39	N/A	Silver birch (<i>Betula pendula</i>)	13	250	3	3	3	3	5	5	Tree of average form. Shared canopy with G12 but situated on the near side of the water course.	No action required at this time.	EM	20-40	C2	28	3.0	/
T40	N/A	Goat willow (<i>Salix caprea</i>)	10	80	3	3	3	3	1	1	Unremarkable tree of average form situated outside of site but within potential influencing distance. Rooting area separated from site by a water course.	No action required at this time.	Y	20-40	C2	2	1.0	/
T41	N/A	Goat willow (<i>Salix caprea</i>)	7	200	6	3	0	3	0	0	Tree originating outside of site but failed into site and resting on the boundary fence.	Cut back to the boundary fence.	EM	<10	U	0	0.0	/
T42	N/A	Goat willow (<i>Salix caprea</i>)	7	200	6	3	0	3	0	0	Tree originating outside of site but failed into site and resting on the boundary fence.	Cut back to the boundary fence.	EM	<10	U	0	0.0	/
T43	N/A	Goat willow (<i>Salix caprea</i>)	7	200	3	1	3	5	0	0	Tree originating outside of site but failed into site and resting on the boundary fence.	Cut back to the boundary fence.	EM	<10	U	0	0.0	/
T44	382	Pedunculate oak (<i>Quercus robur</i>)	15	790	6	6.5	6.5	6.5	1.5	2.5	A tree of seemingly good form. Appears to have originated as part of a banked hedgerow but now isolated. Dominant within the surrounding area.	No action required at this time.	M	40+	B2	282	9.5	/
T45	383	Common holly (<i>Ilex aquifolium</i>)	12	350	2	4	1	1	0	0	Standing dead tree with limited crown intact.	Fell to ground level.	M	<10	U	0	0.0	/

Arboricultural Impact Assessment/Method Statement

1. Tree Preservation Orders and Conservation Areas

Based on enquiries made directly to Rhondda Cynon Taff County Council, the site is not within a Conservation Area and does not contain any trees subject to Tree Preservation Orders (TPO's).

2. Root Protection Areas (RPA's)

Root Protection areas have been calculated according to BS5837. These represent the below ground constraints for a given tree, the radius of which is included in the tree schedule and represented as an orange circle or polygon on the tree constraints plan.

3. Project Arboriculturalist

A project arboriculturalist must be appointed to ensure adherence to the recommendations of this method statement and provide updated tree protection measures if the conditions or scope of work on site change.

4. Areas of Caution

A number of areas on site have been highlighted as areas of caution, these are areas where there is a heightened risk of damage to the above ground structure or root system of retained trees through the proposed works. Certain methodologies in this document will state that they must be followed within areas of caution. The location of all areas of caution can be found on the [Tree Protection Plan](#) within the appendix section of this report.

5. Tree Removal

No tree removal is proposed to make way for this development.

6. Pruning Works

The following pruning works are recommended to facilitate the development:

- T9- to be coppiced to 30cm above ground level to provide clearance for the access road.
- G3- a 1m reduction of the western crown to provide clearance for the access road.
- T13- a 1m reduction of the entire crown to provide clearance for the access road (full crown reduction to maintain balance to the already asymmetrical crown).

Poor pruning techniques can cause a large reduction in the amenity value of a tree, reduce its lifespan or lead to significant structural and physiological issues, requiring extensive remedial work. The following methodology must be followed during all pruning works:

Control Measures

- All pruning is to be carried out by competent, trained individuals in accordance with BS3998.
- All pruning cuts should be made to the nearest suitable growth points utilising natural target pruning. Suitable growth points where a section equal to less than the prescribed dose is removed are preferable, growth points where the cut is more than 3x the diameter of the retained growth point are undesirable.
- Contractors must be made aware of relevant legal constraints such as tree preservation orders or conservation areas, where they apply to trees that are to be pruned. Work shall not be carried out on such trees until approval is granted by the local planning authority.
- No cuts greater than 100mm in diameter are to be made on the main stem of the tree unless otherwise specified.

- All cuts made on to the main stem must be to the branch collar utilising natural target pruning and ensuring that the branch collar is retained as this provides vital protection from pathogen entry into the main stem.

7. Impact from Construction Activity

Physical Damage

Wherever construction or demolition work takes place on a site with retained trees, there is a risk of damage to the branches of retained trees from the movement and use of plant within the site.

The following trees are at significant risk of direct physical damage during development works and the methodology outlined below must be followed in order to prevent such incidents from occurring:

- | | |
|-------|-------|
| • T1 | • T18 |
| • T2 | • T19 |
| • T3 | • T22 |
| • T4 | • T44 |
| • T9 | • G2 |
| • T12 | • G3 |
| • T13 | • G4 |
| • T14 | • G13 |
| • T16 | • W1 |
| • T17 | |

All remaining trees or groups are considered sufficiently far from the proposed development, or separated from the development area by preexisting obstacles, as to not be at significant risk of damage through construction activities.

Control Measures

- By maintaining a construction exclusion zone, with tree protective barrier fencing segregating retained trees from the rest of site, physical damage to trees can be avoided.
- Tree protective barrier fencing must be installed in the configuration outlined in the [Tree Protection Plan](#).
- The alternative tree protective fencing ([figure 3](#)) as outlined in BS5837 is preferable for this site due to its tight nature with fencing within RPA's. This configuration avoids driving posts into the ground, thus reducing root disturbance.
- The crowns of all trees must be enclosed within the tree protective fencing. If more space is needed than the current crown extents allow, the project arboriculturalist must be consulted in order to arrange appropriate pruning measures.
- Machine operators are to be briefed on positioning their equipment to avoid contact with branches from retained trees and the root protection zones.
- Where access is required beneath the crown or canopy area of retained trees, all pruning work to facilitate access must be carried out prior to the development stage, height restriction barriers are to be installed at the edge of areas of caution where entry beneath barriers occurs, and banksmen are to be assigned to make sure no contact with branches is made during the movement or use of plant.

Chemical Damage

There is a risk of chemical damage to trees from the mixing and storage of cement and other damaging chemicals.

The following trees are at significant risk of chemical damage during development works and the methodology outlined below must be followed in order to prevent such incidents from occurring:

- | | | |
|-------|------|-------|
| • T44 | • G3 | • T12 |
| • G13 | • G4 | • G7 |
| • T14 | • T9 | • G8 |

- | | | |
|-------|-------|-------|
| • G9 | • T17 | • T29 |
| • G10 | • T18 | • T30 |
| • G11 | • T19 | • T31 |
| • G12 | • T20 | • T32 |
| • T35 | • T22 | • T33 |
| • T7 | • T23 | • T34 |
| • T38 | • T24 | • G5 |
| • T39 | • T25 | • G6 |
| • T40 | • T26 | |
| • T16 | • T28 | |

Control Measures

- Materials that may have an adverse effect on the health of trees will not be stored or transported within the RPA. E.g., oil, bitumen, cement, and concrete.
- Concrete and cement will not be mixed within 10m of the base of trees.
- Cement and concrete will be mixed downhill from the base of trees or watercourses to avoid the risk of contamination to runoff.
- Where it is not possible to mix and store concrete downhill from trees and watercourses, sediment barriers will be used to prevent runoff from storage and mixing areas.

Soil Compaction

With the movement of personnel and machinery around site, there is always a risk of soil compaction when construction activity takes place near retained trees.

The following trees are at significant risk of damage through soil compaction during development works and the methodology outlined below must be followed in order to prevent such incidents from occurring:

- | | |
|-------|-------|
| • T1 | • T16 |
| • T2 | • T17 |
| • T3 | • T44 |
| • T4 | • G2 |
| • T9 | • G3 |
| • T12 | • G4 |
| • T13 | • G13 |
| • T14 | • W1 |

All remaining trees or groups are considered sufficiently far from the proposed development, or with RPA's separated from the development area by preexisting obstacles, as to not be at significant risk of damage through soil compaction.

Control Measures for Construction Exclusion Zones

- By maintaining a construction exclusion zone, with tree protective barrier fencing segregating retained trees from the rest of site, soil compaction related damage to trees can be avoided.
- Tree protective barrier fencing must be installed in the configuration outlined in the [Tree Protection Plan](#).
- The standard level of tree protective fencing ([figure 3](#)) as outlined in BS5837 is preferable for this site due to volume of plant and vehicle movement expected on site.
- No materials are to be stored within the RPA's of trees for any period of time, including in areas of caution.
- All RPA's are to be checked on site and marked out, measured based on the RPA radius shown in the tree schedule.

8. RPA Incursions

Construction of Heavy Structures Within the RPA's of Retained Trees

There are no conflicts between the RPA's of trees on site with the current proposed layout of buildings or heavy structures.

- If the proposed layout is changed in any way that causes a conflict with the RPA of retained trees the project arboriculturalist must be consulted.

Construction of Light Structures Within the RPA's of Retained Trees

There are no conflicts between the RPA's of trees on site with the current proposed layout of light structures.

- If the proposed layout is changed in any way that causes a conflict with the RPA of retained trees the project arboriculturalist must be consulted.

Demolition Within the RPA's of Retained Trees

No demolition work is proposed within the root protection areas of retained trees.

- If the proposed layout is changed in any way that causes a conflict with the RPA of retained trees the project arboriculturalist must be consulted.

Installation of Services Within the RPA's of Retained Trees

Trenchless installation of the proposed cable is required to enable the full retention of G13 and the following methodology must be followed where this occurs.

- [Table 3](#) in the appendix section of this report provides information on the various engineering solutions available for the trenchless installation of below ground services. This should be used as guidance, in conjunction with specialist consultation, to inform the specific methodology. The arboricultural considerations remain the same in all scenarios.
- The following must take place under the supervision of the project arboriculturalist.
- Insertion and retrieval pits are to be placed outside of the areas of caution in the location indicated on the [Tree Protection Plan](#).
- The duct must be installed at a depth of 600mm below the soil surface or greater.
- Provisions must be made to ensure that maintenance works can be carried out by accessing the ducts from the insertion and retrieval pits, negating the requirement for future excavations within the RPA for maintenance purposes. This should include insertion of ducting or pipe space extra to current requirements to allow for future upgrades in the event of changes to site usage.

Hard Surfacing Within the RPA's of Retained Trees

No hard surfacing work is proposed within the RPA of any retained trees on site.

- If the proposed layout is changed in any way that causes a conflict with the RPA of retained trees the project arboriculturalist must be consulted.

Other Excavation Works in RPA's

No excavation works within the RPA of trees is proposed. If the design is changed to include the necessity for excavation within the RPA of any retained trees, the project arboriculturalist must be consulted.

- If the proposed layout is changed in any way that causes a conflict with the RPA of retained trees the project arboriculturalist must be consulted.

9. Level Changes

No conflicts involving level changes are anticipated on site, although no level data has been provided. If there are any significant level changes around trees the project arboriculturalist must be consulted.

- If the proposed layout is changed in any way that causes a conflict with the RPA of retained trees the project arboriculturalist must be consulted.

10. Drainage and SUDS

No proposed drainage works have been provided; however, the topography of the site and positioning of trees does not suggest any likely conflicts between drainage arrangements and trees. If any drainage features are proposed near retained trees the project arboriculturalist must be consulted, including situations where water may be diverted towards or away from trees.

11. Conflict from Boundary Walls and Fences

There is no conflict between proposed boundary walls and fences with retained trees.

- If the proposed layout is changed in any way that causes a conflict with the RPA of retained trees the project arboriculturalist must be consulted.

12. Conclusion

The proposed layout has been designed to avoid conflict with trees on site, and in general is situated clear of the above and below ground structure of trees. My client has proposed trenchless installation of the cable beneath G13, this will prevent damage to the root system of these trees.

The site layout along with specialist engineering considerations means that no tree removal is proposed to enable the development.

The protection measures proposed align with the recommendations outlined in BS5837 and impact on tree cover is expected to be negligible during this development.

Appendix

Appendix i: Photographs taken on site.

Appendix ii: Tree protection/loss/retention plan showing the location of trees, their root protection areas and their retention category in relation to the proposed development.

Appendix iii: A cascade chart from BS5837: 2012- Trees in relation to design, demolition, and construction– Recommendations explaining the categorisation of trees.

Appendix iv: A diagram showing the recommended configuration for tree protective fencing, from BS5837: 2012- Trees in relation to design, demolition, and construction– Recommendations.

Appendix v: A Glossary of terms and phrases commonly used in tree reports.

Appendix vi: Information to Inform Selection of Trenchless Solutions for the Installation of Services

Appendix i: Photos

Photo 1: the rooting area of [T6](#) is separated from site by a water course.



Photo 2: [T7](#) Stem failure at 1.5m above ground level

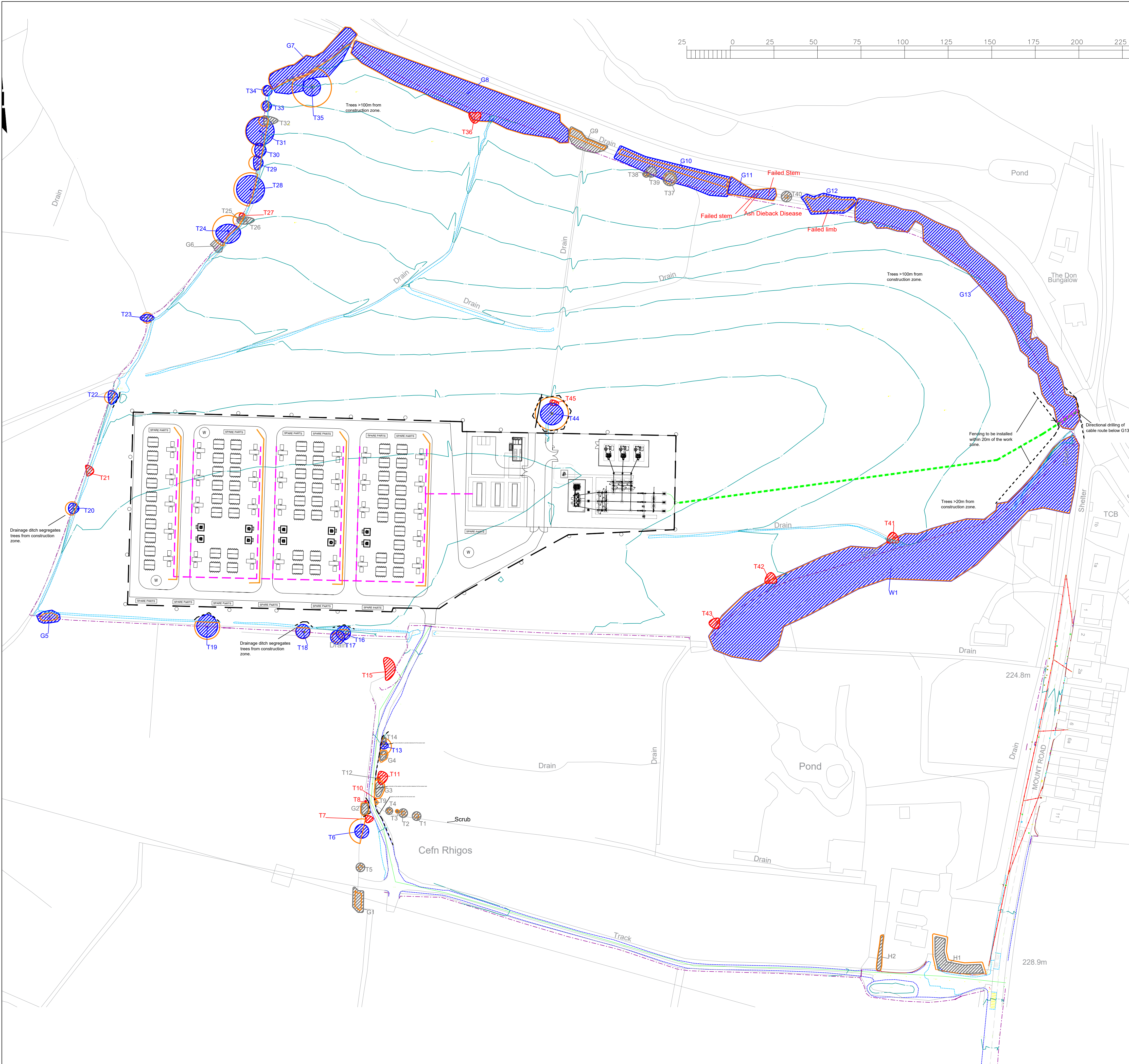


Photo 3: [T9](#) rooting area restricted by the compacted access road to the west.



Photo 4: [T15](#) Northern stem has failed leaving southern stem leaning towards site and poorly supported.





Ref	Tag	Species	Height	Stem Diam (mm)	Life Stage	Life Expectancy	Retention Category	RPA Area (m ²)	RPA Radius (m)
G1	351	Common hawthorn (<i>Crataegus monogyna</i>)	6	100	M	20-40	C2	4.5	1.2
G2	358-359	Common hawthorn (<i>Crataegus monogyna</i>)	9	210	EM	20-40	C2	20	2.5
G3	363-364	Common hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>)	8	200	EM	20-40	C2	18	2.4
G4	367-36	Common hawthorn (<i>Crataegus monogyna</i>)	4	140	EM	20-40	C2	8.9	1.7
G5	N/A	Pedunculate oak (<i>Quercus robur</i>)	12	220	EM	20-40	B2	22	2.6
G6	N/A	Goat willow (<i>Salix caprea</i>), Common dogwood (<i>Cornus sanguinea</i>)	8	80	Y	40+	C2	2.9	1
G7	378-379	Silver birch (<i>Betula pendula</i>), Common hawthorn (<i>Crataegus monogyna</i>), Hazel (<i>Corylus avellana</i>), Pedunculate oak (<i>Quercus robur</i>), Goat willow (<i>Salix caprea</i>)	18	700	M	20-40	B2	222	8.4
G8	N/A	Pedunculate oak (<i>Quercus robur</i>), Goat willow (<i>Salix caprea</i>), Silver birch (<i>Betula pendula</i>), Common alder (<i>Alnus glutinosa</i>)	18	400	EM	20-40	B2	72	4.8
G9	N/A	Common ash (<i>Fraxinus excelsior</i>), Goat willow (<i>Salix caprea</i>)	8	200	EM	20-40	C2	18	2.4
G10	N/A	Common alder (<i>Alnus glutinosa</i>), Pedunculate oak (<i>Quercus robur</i>), Goat willow (<i>Salix caprea</i>), Silver birch (<i>Betula pendula</i>)	18	250	EM	20-40	B2	28	3
G11	N/A	Common ash (<i>Fraxinus excelsior</i>), Goat willow (<i>Salix caprea</i>), Silver birch (<i>Betula pendula</i>)	18	350	EM	20-40	B2	55	4.2
G12	N/A	Goat willow (<i>Salix caprea</i>), Silver birch (<i>Betula pendula</i>)	13	300	EM	20-40	B2	41	3.6
G13	N/A	Common ash (<i>Fraxinus excelsior</i>), Silver birch (<i>Betula pendula</i>), Goat willow (<i>Salix caprea</i>), Lodgepole pine (<i>Pinus contorta</i>)	18	400	EM	20-40	B2	72	4.8
H1	N/A	Common beech (<i>Fagus sylvatica</i>)	3	150	EM	20-40	C2	10	1.8
H2	N/A	Leyland cypress (<i>X Cuprocyparis leylandii</i>)	3	100	EM	20-40	C2	4.5	1.2
W1	N/A	Common ash (<i>Fraxinus excelsior</i>), Sitka spruce (<i>Picea sitchensis</i>), Grey alder (<i>Alnus incana</i>), Hybrid larch (<i>Larix x eurolepis</i>), Scots pine (<i>Pinus sylvestris</i>), Goat willow (<i>Salix caprea</i>)	20	400	EM	20-40	B2	72	4.8
T1	351	Blackthorn (<i>Prunus spinosa</i>)	6	100	M	20-40	C2	4.5	1.2
T2	352	Blackthorn (<i>Prunus spinosa</i>)	6	100	M	20-40	C2	4.5	1.2
T3	353	Blackthorn (<i>Prunus spinosa</i>)	5	80	EM	20-40	C2	2.9	1
T4	354	Common alder (<i>Alnus glutinosa</i>)	5	90	EM	10-20	C2	3.7	1.1
T5	355	Common hawthorn (<i>Crataegus monogyna</i>)	6	180	M	20-40	C2	15	2.2
T6	255	Common beech (<i>Fagus sylvatica</i>)	15	590	M	40+	B2	157	7.1
T7	357	Crab apple (<i>Malus sylvestris</i>)	6	450	M	<10	U	0	0
T8	360	Common hawthorn (<i>Crataegus monogyna</i>)	5	150	EM	<10	U	0	0
T9	352	Blackthorn (<i>Prunus spinosa</i>)	6	100	M	20-40	C2	4.5	1.2
T10	362	Blackthorn (<i>Prunus spinosa</i>)	6	100	EM	20-40	U	0	0
T11	365	Crab apple (<i>Malus sylvestris</i>)	13	390	M	<10	U	0	0
T12	366	Common hawthorn (<i>Crataegus monogyna</i>)	3	80	EM	20-40	C2	2.9	1
T13	369	Silver birch (<i>Betula pendula</i>)	12	400	M	20-40	B2	72	4.8
T14	370	Common hawthorn (<i>Crataegus monogyna</i>)	5	120	M	20-40	C2	6.5	1.4
T15	N/A	Goat willow (<i>Salix caprea</i>)	13	300	M	<10	U	0	0
T16	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	250	EM	40+	B2	28	3
T17	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	350	EM	40+	B2	55	4.2
T18	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	500	EM	40+	B2	113	6
T19	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	600	EM	40+	B2	163	7.2
T20	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	320	EM	40+	B2	46	3.8
T21	371	Pedunculate oak (<i>Quercus robur</i>)	4	250	EM	<10	U	0	0
T22	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	300	EM	40+	B2	41	3.6
T23	N/A	Pedunculate oak (<i>Quercus robur</i>)	8	250	EM	40+	B2	28	3
T24	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	750	EM	40+	B2	254	9
T25	372	Silver birch (<i>Betula pendula</i>)	15	350	EM	10-20	C2	55	4.2
T26	N/A	Goat willow (<i>Salix caprea</i>)	8	80	M	10-20	C2	2.9	1
T27	373	Silver birch (<i>Betula pendula</i>)	10	250	EM	<10	U	0	0
T28	N/A	Pedunculate oak (<i>Quercus robur</i>)	15	800	EM	40+	B2	290	9.6
T29	N/A	Silver birch (<i>Betula pendula</i>)	15	350	EM	40+	B2	55	4.2
T30	N/A	Silver birch (<i>Betula pendula</i>)	15	350	EM	40+	B2	55	4.2
T31	373	Pedunculate oak (<i>Quercus robur</i>)	15	700	EM	40+	B2	222	8.4
T32	375	Silver birch (<i>Betula pendula</i>)	15	240	EM	10-20	C2	26	2.9
T33	372	Pedunculate oak (<i>Quercus robur</i>)	13	240	EM	40+	B2	26	2.9
T34	377	Silver birch (<i>Betula pendula</i>)	13	240	EM	40+	B2	26	2.9
T35	379	Common alder (<i>Alnus glutinosa</i>)	15	940	OM	20-40	B2	400	11
T36	381	Goat willow (<i>Salix caprea</i>)	7	200	EM	<10	U	0	0
T37	N/A	Goat willow (<i>Salix caprea</i>)	13	250	EM	20-40	C2	28	3
T38	N/A	Goat willow (<i>Salix caprea</i>)	8	100	EM	20-40	C2	4.5	1.2
T39	N/A	Silver birch (<i>Betula pendula</i>)	13	250	EM	20-40	C2	28	3
T40	N/A	Goat willow (<i>Salix caprea</i>)	10	80	Y	20-40	C2	2.9	1
T41	N/A	Goat willow (<i>Salix caprea</i>)	7	200	EM	<10	U	0	0
T42	N/A	Goat willow (<i>Salix caprea</i>)	7	200	EM	<10	U	0	0
T43	N/A	Goat willow (<i>Salix caprea</i>)	7	200	EM	<10	U	0	0
T44	382	Pedunculate oak (<i>Quercus robur</i>)	15	790	M	40+	B2	282	9.5
T45	383	Common holly (<i>Ilex aquifolium</i>)	12	350	M	<10	U	0	0

Key

- Category A. Trees with high retention value.
- Category B. Trees with moderate retention value.
- Category C. Trees with low retention value.
- Category U. Trees unsuitable for retention due to condition
- Root Protection Area (RPA)

Tree Key

- Canopy extents, hatched area represents area within the canopy.
- Location of tree base, taken from position on TOPO or GPS.

Reference number (T for trees, G for groups, W for woodlands, H for hedges).

RPA- an indication of the estimated minimum rooting area required by the tree. Calculated in accordance with BS5837.

- Tree Protective Fencing

- Area of caution where trenchless service installation must be employed as outlined in the Land West of Mount Road Combined Arboricultural Impact Assessment and Method Statement

Tree Protection Plan

Land West of Mount Road

Revision 1

1:1100 at A1

Client

Light House Development Consultancy

Survey Code

24178

Drawn by

BC

Surveyed by

BC

Date

23/01/2025

 **Tree Check**
Arboriculture Ltd.

Ben Clark
TechArborA, Dip Arb L4 (ABC)

Tree Check Arboriculture Ltd.
Tel. 07736236152
Email:ben@treecheck.co.uk
www.Treecheck.co.uk

Drawing designed to be viewed in colour. Indicative only, check all RPA's on site in accordance with table.

Appendix iii: Cascade Table for the Categorisation of Trees (BS5837)

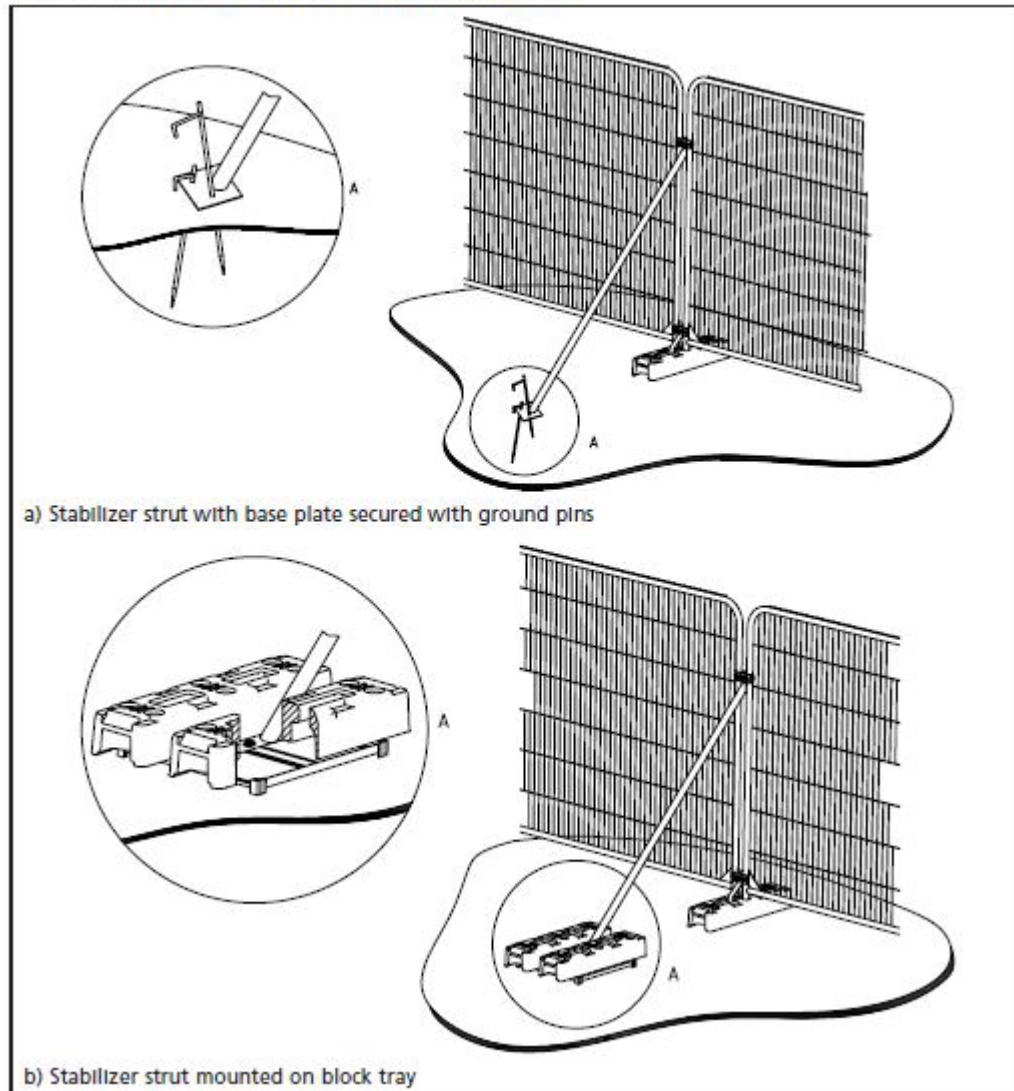
Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)		
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 U category trees (i.e. 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		
	1 Mainly Arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation
Category A Those 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 essential components of groups, or of 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)
Category B Those 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 benefits
Category C Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	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

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Appendix iv: Recommended Configuration for Tree Protective Fencing (BS5837)

Figure 3 Examples of above-ground stabilizing systems



Appendix v: Glossary

Aerial Inspection: A close inspection of the aerial part of a tree, either by mobile elevated work platform (MEWP) or by a tree surgeon (climbing inspection). **Adaptive Growth;** The growth of new wood in response to a stress concentration in the structure of a tree

Adventitious; A shoot which arises from tissue other than a growing shoot apex or bud, for instance in callus associated with a wound.

Anchorages; The holding of the structural root system of a tree with in the soil,.

Architecture; the formation and distribution of a trees branch system.

Arboricultural Impact Assessment: That part of the BS 5837 (2012) procedure that evaluates the tree-related constraints to a development (loss of trees, encroachment into root protection areas etc.).

Arboricultural Method Statement: That part of the BS 5837 (2012) procedure that sets out how site works should be carried out near trees to avoid accidental damage.

Arboriculturalist: A person skilled or knowledgeable in the field of arboriculture. The alternative term 'arboriculturalist' is sometimes used. A Person trained and experienced in the management of trees, and trees in relation to construction.,

Assessment; The process of examining the variables involving a trees condition and location in order to assess the risk posed by an individual tree.

Bole (trunk): The main , vertical stem or trunk of a tree.

Branch: a limb extending from the main stem or parent branch of a tree

Canopy: the combined foliage of a group of trees or a woodland, i.e. the combined area of numerous crowns.

Construction Exclusion Zone; The part of a development site from which all pedestrian and vehicular movements are excluded by protective fencing, typically to ensure the wellbeing of trees, during site works. Usually determined by the RPA of a tree.

Crown: in arboriculture the main foliage-bearing portion of a tree containing the leaves and branches

Defect: Any feature of a tree that is likely to make it less safe (in the case of a structural defect) or otherwise to reduce its health, longevity, landscape prominence or conservation value for any other reason.

Dysfunction: The cessation of physiological function in woody material, especially vascular functions such as water and sap transportation.

Failure: Fracture or deformation in any load bearing part of the tree, compromising stability or causing loss of support for part of, or all of the tree structure,

Group: More than one tree in close proximity that possess sufficient similarity or cohesiveness that they can be treated as a single entity for the purpose of this report.

Heave: deformation of shrinkable clay soil related to the expansion caused by rehydration.

Leader: the dominant, vertical shoot or stem of a tree.

Pruning: The cutting off or cutting back of tree branches or foliage to direct growth, remove an obstructing part, mitigate a nuisance, make safe, remove a diseased part, increase longevity, simulate natural damage, enhance habitat for wildlife etc.

Retained Tree: a tree that has been considered suitable for retention and therefore selected to remain as part of the final site layout.

Risk: the likelihood of a hazard to cause actual harm to people or property,

Root Protection Area (RPA); The area around the base of a tree that contains sufficient root volume to ensure the future well-being of the tree in the event of nearby soil disturbance (as on a development site). It is calculated according to guidelines in BS 5837 (2012).

Subsidence (branch): Branches, especially if spreading, tend gradually to subside under their own weight, and may eventually reach ground level in large open-grown trees. Rapid subsidence may result in crown separation or congested bark and can lead to branch failure where there is no support within the elastic limit of a given branch.

Subsidence (soil): Broadly, the downward movement of ground and an affected foundation influenced by soil properties, weather, foundation depth and nearby vegetation.

Targets: An element of tree risk: the subject of injury or damage within range of a hazard.

Tree: The definition of 'tree' is a composite of tree species, tree form and tree size. The blue book offers the following: A perennial plant with a self-supporting woody main stem, usually developing woody branches at some distance from the ground and growing to a considerable height and size. This definition has the three main elements in general form. **For the purposes of 5837 surveys, only plants with a stem diameter of 75mm or above are considered trees.**

Tree Constraint Plan (TCP): Site plan showing the tree-related constraints to development as envisaged in BS 5837 (2012). Common constraints are the loss of trees, encroachment into a tree's root protection area.

Tree Condition Inspection/Survey: A procedure to inspect a tree or trees. Variables used to describe a tree include position (if not already plotted on a topographical survey), species identity, maturity, various dimensions (main stem diameter, height, crown radius etc.), aspects of form, vigour, condition, incidence of pests, diseases, damage and defects, evidence of past management etc. Site factors, position in the landscape and site usage may also be relevant, usually including its position, species identity, dimensions, age class, condition, conservation value etc. as appropriate, and to identify and evaluate defects. It is also common to make management recommendations (see schedule of works). Tree inspection is a fundamental of tree management and advisory practice in arboriculture.

Tree Preservation Order: (UK) an order made by a local authority or other planning authority to protect a tree, group of trees, area of (scattered) trees or woodland under Part VIII of the Town and Country Planning Act 1990. There have been several amendments, the latest being the Town and Country Planning (Tree Preservation) (England) Regulations 2012. An order is generally made on the grounds of amenity and expediency. Anyone proposing works to a TPO tree must seek prior consent from the authority using the form IAPP. With the advent of the 2012 regulations, some of the detail in existing TPOs in England has been revoked.

Tree Protection Plan: scale drawing prepared by an arboriculturalist showing the final layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

Trunk: see bole.

Vigour: The health and resilience of a tree (from the Latin 'to be strong'), reflected in the capacity of the whole tree to grow (see growth rate). The term is often used as a description of overall condition on a qualitative scale from 'high' to 'low'.

Visual Tree Assessment (VTA): The standard approach to tree risk assessment consisting of the diagnosis of structural defects and the evaluation of their significance from visible signs and the application of biomechanical criteria. Simple equipment such as a sounding mallet, probe and binoculars are commonly used.

Wind exposure: the degree to which a tree or other object is exposed to wind, with regard both to duration and velocity, often taking into account prevailing wind directions.

Windthrow: the blowing over of a tree at its roots.

Appendix vi: Information to Inform Selection of Trenchless Solutions for the Installation of Services

Table 3 Trenchless solutions for differing utility apparatus installation requirements

Method	Accuracy mm	Bore dia. ^{A)} mm	Max. sub. ^{B)} length m	Applications	Not suitable for
Microtunnelling	<20	100 to 300	40	Gravity-fall pipes, deep apparatus, watercourse/ roadway undercrossings	Low-cost projects due to relative expense
Surface-launched directional drilling	≈100	25 to 1 200	150	Pressure pipes, cables including fiber optic	Gravity-fall pipes, e.g. drains and sewers ^{C)}
Pipe ramming	≈150	150 to 2 000	70	Any large-bore pipes and ducts	Rocky and other heavily obstructed soils
Impact moling ^{D)}	≈50 ^{E)}	30 to 180 ^{F)}	40	Gas, water and cable connections, e.g. from street to property	Any application that requires accuracy over distances in excess of 5 m

^{A)} Dependent on strata encountered.

^{B)} Maximum subterranean length.

^{C)} Pit-launched directional drilling can be used for gravity fall pipes up to 20 m subterranean length.

^{D)} Impact moling (also known as thrust-bore) generally requires soft, cohesive soils.

^{E)} Substantial inverse relationship between accuracy and distance.

^{F)} Figures given relate to single pass: up to 300 mm bore achievable with multiple passes.

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The Client is the party commissioning and funding the survey. The Consultant is any person(s) employed by Tree Check Arboriculture LTD to carry out any related works, as well as Tree Check Arboriculture LTD as an entity.

Limitations

1. This survey reflects the condition of the trees as they were observed on 04/10/2023. The condition of trees can change quickly and if any significant change is observed then a qualified arboriculturist should be consulted regardless of the recommended reinspection period.
2. While every attempt has been made to provide accurate recommendations based on the condition of the observed trees, Tree Check Arboriculture Ltd. can accept no liability for damage, injury, or loss of property caused by faults that were not apparent at the time of inspection. These include but are not limited to faults that may only be visible seasonally such as fungal fruiting bodies, or faults that were obscured or inaccessible to the surveyor such as those high up in the crown or obscured by ivy.
3. During adverse weather conditions such as storms, otherwise healthy trees can fail. Trees should be visually inspected after any high winds.
4. This report cannot predict the reaction of inspected trees to external factors such as extreme climate events, accidents, or vandalism.
5. The author(s) can accept no liability for damages if the recommended works are not carried out as per this report in line with BS:3998.
6. Operational recommendations (e.g.) climb and dismantle, are for loose guidance only. It remains the responsibility of the assigned contractor to decide on the safest work method. Tree Check Arboriculture LTD. accepts no responsibility for damages occurring during the carrying out of recommended works.
7. This report does not cover any underground part of trees, nor does it consider any affect inspected trees may have on shrinkable clay soils since these issues are almost entirely restricted to areas of shrinkable clay soils and soil analysis was not specified in the brief.
8. **Recommendations made in this report do not override any legislation covering the affected trees. Trees in a conservation area, trees subject to preservation orders and groups of trees requiring felling licenses still require relevant permissions before work can be carried out. Unless otherwise agreed the Tree Check Arboriculture LTD will not be checking for the presence of this legislation or be applying for these permissions. The Client must contact the consultant if they are unsure on this matter.**
9. Certain areas of the site were inaccessible in the time scale of this survey due to dense vegetation cover. Areas and trees where this has been an issue are described in certain trees and groups in the survey table.
10. **The findings of this report cannot be relied upon after 12 months from the time of inspection or the recommended reinspection date (if sooner).**

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