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BS5837

Arboricultural Survey, Impact Assessment and Tree Protection

Site: Maes y Droell

Client: Stephenson Halliday

Surveyor/s	Report Author	Quality Control	Document Sign-off
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1. Summary

- 1.1 Lowther Forestry Group Ltd has been commissioned by Stephenson Halliday to produce an Arboricultural Survey and Arboricultural Impact Assessment (AIA) following guidance of BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*. The report is to aid a planning application for reinstatement of a disused quarry and an extension in quarried land.
- 1.2 The report aims to give a balanced judgement of the trees, their protection prior to the development phase, and future management.
- 1.3 The site is Maes y Droell Works located approximately 5 km south of Mold in Denbighshire, Wales. The survey area comprises two land parcels: a southern part that has been quarried in the recent past with early successional habitats within remnants of woodland features, and a northern parcel comprising upland habitat types forming part of a historic lead mining area.
- 1.4 The proposed development is to reinstate quarrying activities in four phases firstly to the south, then to the northern land parcels, followed by restoration. Areas of land are proposed to be set-aside in accordance with Net Benefit for Biodiversity.
- 1.5 Trees and vegetation meeting the definitions of an individual tree, tree group, woodland, or hedgerow in accordance with BS5837:2012 were recorded as part of the survey. Other vegetation that did not meet these definitions was not included within the arboricultural assessment.
- 1.6 The survey identified and recorded 22 Groups, 3 hedges and 11 individual trees requiring consideration prior to design or development of the site.

Table 1. Arboricultural Impact Assessment

Arboricultural Impact Assessment Table					
Recommendations to Facilitate Development		Category A	Category B	Category C	Category U
	Remove			G5, G14, G19	
	Partial Remove		G7, G8, G10, G16	G4, G6, G9, G13, G17, G22	
	No action		G11, G15, G20 T1, T2, 0090, 0091, 1662, 1665, 1666, 1667	G1, G2, G12, G18, G21 H1, H2, H3 1663	G3 1661, 1664

- 1.7 To facilitate the reinstatement and extension of the quarry, three Category C groups will need to be removed in their entirety, and ten groups (four Category B and six Category C) which will require partial removal to facilitate the reinstatement and extension of the quarry, and the retention of screening.
- 1.8 All tree works should conform to BS 3998: 2010 *Recommendations for Tree Works*.

- 1.9 Root Protection Areas can be seen in Drawing D01A, Tree Constraints Plan (F748-05-D01A). The proposed development can be seen in Drawings D02A-E, Arboricultural Impact Assessment (F748-05-D02A-E).
- 1.10 An Arboricultural Method Statement is included in this report to outline ways in which trees can be protected from unnecessary damage during the development.
- 1.11 Details relating to individual trees can be seen in Appendix 1, Tree Data Table.

2. Introduction

- 2.1 Lowther Forestry Group Ltd has been commissioned by Stephenson Halliday to produce an Arboricultural Survey and Arboricultural Impact Assessment (AIA) following guidance of BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*. The report is to aid a planning application for reinstatement of a disused quarry and an extension in quarried land.

3. Purpose of the Report

- 3.1 The report aims to provide a balanced judgement of the trees, assessing their suitability for retention or removal. The survey will be used to produce an arboricultural Impact Assessment (AIA) and Tree Protection Plan (TPP) following the guidance of BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*.
- 3.2 To produce a plan to a scale and level of accuracy appropriate to the proposal that shows the position, crown spread, and root protection area (RPA) of every retained tree on site
- 3.3 To provide a schedule of tree works for all the retained trees in 3.1 above, specifying pruning and other remedial or preventative work; whether for physiological, hazard abatement, aesthetic, or operational reasons. All works shall be carried out in accordance with BS 3998: 2010 *Recommendations for Tree Work*.
- 3.4 Identify tree removal that would be required for the proposed development to take place.
- 3.5 Highlight the location and specification of Construction Exclusion Zone (CEZ) fences and ground protection to protect trees and soil from unnecessary damage during the demolition and construction phases.

4. The Site

- 4.1 The site is Maes y Droell Works located approximately 5 km south of Mold in Denbighshire Wales.
- 4.2 The survey area comprises two land parcels separated by a public right-of-way. The southern part of the site measuring approximately 13.7 ha has been quarried in the recent past and is therefore characterised predominantly by early successional habitats on stockpiles, together with remnant woodland features around the outer boundaries. The northern parcel measuring approximately 8 ha forms part of a historic lead mining area and supports a greater extent of upland habitat types.
- 4.3 Surrounding land use includes predominantly farmland with dispersed residential properties and Graig Quarry located less than 1 km to the west.

5. Proposed Development

- 5.1 The proposed development is to reinstate quarrying activities in four phases firstly to the south, then to the northern land parcels followed by restoration. Areas of land are proposed to be set-aside in accordance with Net Benefit for Biodiversity. Areas of vegetation are expected to be removed to facilitate the re-opening of the works and to allow for access into, and around, the two land parcels. Screening by existing trees is proposed to be retained.
- 5.2 The location of the development phases can be seen in Drawings D02A-E, Arboricultural Impact Assessment (F748-05-D02A-E).

6. Documents Provided

- 6.1 The survey area was provided by SK Environmental prior to the surveys taking place. Drawings showing the proposed working phases and restoration plan were provided by Stephenson Halliday to facilitate the writing of the Arboricultural Impact Assessment.

7. Methodology

- 7.1 Trees were surveyed and categorised in accordance with the cascade chart Table 1 of BS 5837: 2012 Trees in Relation to Design, Demolition and Construction - Recommendations, page 9. Survey methodology can be seen in Appendix 6.
- 7.2 A schedule of tree works for all the retained trees in 3.1 above, specifying pruning and other remedial or preventative work; whether for physiological, hazard abatement, aesthetic, or operational reasons. All works shall be carried out in accordance with BS3998: 2010 Recommendations for Tree Work.
- 7.3 All observations were made from the ground. Tools used include a clinometer, diameter tape, and tablet with GPS recording facility.
- 7.4 Data obtained from the survey was used to produce the Tree Constraints Plan (Appendix 2 – Drawing D01).
- 7.5 An Arboricultural Impact Assessment was then created (Appendix 2 – Drawings D02), overlaying the proposed design and showing the extent of crown spreads and Root Protection Areas (RPA's) in relation to the site.

8. Legal Restrictions

- 8.1 Trees in any location may be protected by legislation. Where development is proposed, additional legal protection may be appropriate and can be enforced by the local authority. Attention is drawn to legal controls and liabilities under common law for consideration at the earliest stages of potential site development.
- 8.2 A check on the Denbighshire County Council's interactive map (accessed 17.06.26) indicated that there are no Tree Preservation Orders or Conservation Area designations affecting this site.
- 8.3 Further legal considerations can be found in Appendix 10.

9. Caveats and Report Limitations

- 9.1 This is not a safety survey however any obvious visual defects which cause an elevated risk of harm may also be recorded with appropriate recommendations. The survey produces a picture of those trees surveyed as on the date when the survey was undertaken. It is quite possible for hazards to have developed since that time.
- 9.2 This report confines itself to the silvicultural and arboricultural aspects of the trees and does not address any ecological or engineering aspects or anything in relation to soils for which other specialists' advice may be sought.

10. Survey

- 10.1 The survey was carried out in accordance with BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*. A glossary of arboricultural terms used in this report can be found in Appendix 3.
- 10.2 Trees and vegetation meeting the definitions of an individual tree, tree group, woodland, or hedgerow in accordance with BS5837:2012 were recorded as part of the survey. Other vegetation that did not meet these definitions was not included within the arboricultural assessment.
- 10.3 The surveyors were Ben Knipe and Dave Wolff-Geall, Arb Consultants. Surveyor qualifications can be found in Appendix 4.
- 10.4 The trees have been categorised in accordance with the cascade chart in Table 1 of BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*, page 9. The survey methodology can be seen in Appendix 5, Survey Methodology.
- 10.5 The survey identified and recorded 22 Groups, 3 hedges and 11 individual trees requiring consideration prior to design or development of the site.
- 10.6 The trees have been divided into the following four categories and are as follows:
- Category A = 0 trees
 - Category B = 7 groups, 8 trees
 - Category C = 14 groups, 1 tree, 3 hedges
 - Category U = 1 group, 2 trees
- 10.7 Table 2 (below) Tree Quality Assessment Table shows the trees on site categorised following guidance from BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*.

Table 2.

Tree Quality Assessment Table			
Category	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values including conservation
A			
B	<i>G10, G11</i> <i>T1, 1662, 1665, 1666</i>	<i>G7, G8, G10, G11, G15, G16, G20</i> <i>T1, T2, 0090, 0091, 1662, 1665, 1667</i>	
C	<i>G1, G4, G5, G6</i> <i>1663</i>	<i>G1, G2, G4, G5, G6, G9, G12, G13, G14, G17, G18, G19, G21, G22</i> <i>1663, H1, H2, H3</i>	
U	<i>G3, 1661, 1664</i>		

A, B, C and U indicate the contribution in years the tree will potentially live for: 40+ years = A, 20 to 40 years = B, 10 to 20 years = C, less than 10 years = U. Trees can appear in more than one category.

- 10.8 Category A trees are those of high quality and value, with an estimated remaining life expectancy of at least 40 years. There are no trees recorded as Category A in the survey area.
- 10.9 The Category B trees those are of moderate quality and value with an estimated remaining life expectancy of at least 20 years. There are eight individual trees and seven groups recorded as Category B in the survey area. The individual trees are either common ash (*Fraxinus excelsior*) or sycamore (*Acer pseudoplatanus*) with mature and early mature specimens recorded along roadsides. Symptoms of Chalara ash dieback (*Hymenoscyphus fraxineus*) can be seen on three of the four recorded ash. The groups are all mixed, mainly deciduous species except for G20 which is Norway spruce (*Picea abies*). These contain mature and semi-mature trees including common ash (*Fraxinus excelsior*), silver birch (*Betula pendula*), and goat willow (*Salix caprea*). Trees in these groups have a higher collective value than as individuals, and are contributing to screening of the former quarry site.
- 10.10 The Category C trees are those trees of low quality and value with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm. Hedges are in this category due to narrow stem diameters. There are 14 groups, 3 hedges and one individual tree in this category. The groups are predominantly mixed broadleaf species, except for G6 which is Leyland cypress (*X Cuprocyparis leylandii*) and groups G13 and G14 which are entirely goat willow. The hedges are mixed species without signs of recent management. These border a field on the northeast corner of the southern land parcel. Tree 1663 is a mature common ash beside the road which is heavily affected by Chalara ash dieback
- 10.11 Category U trees are trees which are unsuitable for retention and cannot realistically be retained as living trees for longer than 10 years. One group and two trees are recorded in this category due to significant symptoms of Chalara ash dieback which is likely to develop further.

11. Arboricultural Impact Assessment

- 11.1 Any arboricultural recommendations for the trees aim to promote health, growth, and retention of suitable specimens within the development.
- 11.2 Recommendations may also aim to reduce the potential risk of harm to users of the site, by identifying significant defects within the trees.
- 11.3 Table 3 (below) Arboricultural Impact Assessment Table identifies trees to be removed to facilitate the development, and trees to be retained and managed within the proposed development.

Table 3.

Arboricultural Impact Assessment Table					
Recommendations to Facilitate Development		Category A	Category B	Category C	Category U
	Remove			G5, G14, G19	
	Partial Remove		G7, G8, G10, G16	G4, G6, G9, G13, G17, G22	
	No action		G11, G15, G20 T1, T2, 0090, 0091, 1662, 1665, 1666, 1667	G1, G2, G12, G18, G21 H1, H2, H3 1663	G3 1661, 1664

- 11.4 To facilitate the reinstatement and extension of the quarry, three Category C groups will need to be removed in their entirety. These all consist of immature self-seeded trees on the roadside (G5), on disturbed ground (G14), and on open ground (G19). Goat willow are the predominant species in these groups.
- 11.5 There are ten groups, four Category B and six Category C, which will require partial removal to facilitate the reinstatement and extension of the quarry and the retention of screening. Group 13 in particular will be partially retained to provide screening from the east. The roadside trees within groups G4 and G6 are recommended to be removed to achieve a suitable visibility splay from the quarry entrance. For example, G6 is a line of thirteen Leyland cypress, of which the two or three trees nearest the roadside might need to be removed for sight lines.
- 11.6 To facilitate a new quarry access track from the southern to the northern land parcels, approximately 20 m will need to be removed from the eastern ends of both groups G16 & G22. These two groups are located along the public right-of-way dividing the land parcels. In addition, the western end of group G17 (up to 30 m) will require removal for the same access route to be created, and also quarrying activities.
- 11.7 Reinstatement of quarrying will require the partial removal of groups G7-10 where land is to be removed, with the retention of their roadside edges. A suitable buffer will therefore be required between the retained trees and ground disturbance, which is discussed in Section 12.9.

- 11.8 There are nine groups, three hedges and eleven trees which do not require action to facilitate development at this time. These include Category B trees which are on the roadside boundaries and therefore will not be impacted by the works. These will however require protection from the quarrying works as part of the proposed development. The protection can include a combination of temporary and permanent fencing, earth bunds, and careful siting of stockpiles and infrastructure.
- 11.9 It is recommended to protect from damage retained trees in groups G16 and G22, and individual tree 0090, during the construction of the new quarry access route from the southern to the northern land parcels. Construction Exclusion Zone (CEZ) fences are recommended to be used and placed outside of the Root Protection Areas of the retained trees. The RPA radiuses, and therefore minimum distance the fences should be sited away from the trees, can be found on the Tree Data Table Appendix 1. CEZ will need to be used until more permanent barriers can be put into place.
- 11.10 Examples of suitable CEZ fences can be seen in Appendices 6 & 7.
- 11.11 Earth bunds should not be constructed on top of RPAs of retained trees, as the change in ground level can cause significant root damage and tree mortality. Further, new stockpiles of material should not be piled on the RPA of retained trees. Careful site design is advised to avoid the need for bunds, spoil, or material to be placed on to RPA's.
- 11.12 New excavations are not to take place in the RPA of retained trees. Of particular note are belts of trees to be retained following partial removal of larger groups. A suitable buffer zone is advised between the retained trees and new excavations, which should be at least outside the RPA radius, or beyond the canopy spread – whichever distance is greatest. It should be noted that changes in the water table resulting from excavations can have a detrimental effect on tree health, therefore buffer zones should be of adequate width.
- 11.13 Should the plans or methods change, then revised works will need to be approved by Denbighshire County Council and the Project Arboriculturalist consulted.
- 11.14 Details of RPAs and tree works can be seen on the Tree Data Table in Appendix 1.

Construction Material Storage

- 11.15 All construction material should be stored on existing hard surfacing at least 10 m from the edge of any RPA.
- 11.16 No mixing of concrete is to be carried out within 10 m of the edge of any RPA. The Control of Substances Hazardous to Health (COSHH) Regulations 2002 (as amended) is relevant to the use of materials such as cement, and regulations should be adhered to protect both worker health and the local environment.
- 11.17 Any material that could contaminate soil or watercourses should be stored at least 10 m from RPAs and watercourses and handled in a suitable manner that reduces the risk of damage to the environment. A suitable method statement and risk assessment will be required for all materials to be used on site to ensure preservation of the health of the local environment.

- 11.18 When siting storage areas consideration should be given to site topography, and an assessment made of the potential impact of any run-off of spilled materials.

Services

- 11.19 The installation of services has not been indicated on the supplied drawings. Where any services are proposed to be installed within the RPA of retained trees the project arboriculturist must be consulted. Suitable method statements can then be provided and may include excavations by hand or with air tools. No mechanical excavation to take place within RPA's.

12. Sequence of Works

- A pre-commencement meeting attended by the project arboriculturist and site manager is recommended before any works are undertaken. A copy of this report and the Arboricultural Method Statement should be retained on site.
- All tree works detailed in the survey should be carried out prior to equipment or materials being brought onto site. Heavy tree felling equipment should not be used on soft ground within the Root Protection Area (RPA) of retained trees.
- The removal of existing structures and stockpiles can now take place, and construction works can commence.
- Site visits may be carried out by the project arboriculturist upon request by the client to undertake a watching brief, and to check that tree protection measures and distances are being followed.
- Annual inspections upon request by the client can be carried out by the project Arboriculturalist to assess the health and safety of retained trees, in particular those in falling distance of public highways, public rights-of-way, and third-party land.

Appendix 1 Tree Data Table

Tree Data Table - Arboricultural Survey BS 5837: 2012 - F748-05									 LOWTHER	
Client: Stephenson Halliday				Location: Denbighshire, Wales		Surveyors: B. Knipe. & D. Wolff-Geall				
Site: Maes y Droell				Survey Dates: 19 Jan, 16 Jun 2026		Weather: Dry and bright				
Tree ID	Species	Height (m)	Stem diameter(s) (mm)	All Measurements	Life Stage	Retention Category	General Observations	RPA	Recommendations	Rationale
G1	Mixed species <i>(Mixed species)</i>	15	400	Height (m): 15 Stem Diam(mm): 400 Spread (m): 4N, 4E, 4S, 4W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	C1,2	Edge of group which consists of hazel overhangs the footway and highway.	Area: 1509 sq m.	No action required.	Retained for screening.
G2	Mixed species <i>(Mixed species)</i>	14	400	Height (m): 14 Stem Diam(mm): 400 Spread (m): 4N, 4E, 4S, 4W Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Semi Mature	C2	—	Area: 3934 sq m.	No action required.	Retained for screening.
G3	Common ash x6 <i>(Fraxinus excelsior)</i>	10	400	Height (m): 10 6 stems, avg.(mm): 400 Spread (m): 5N, 5E, 5S, 5W Life Stage: Early Mature Rem. Contrib.: <10 years	Early Mature	U	Significant symptoms of Chalara ash dieback.	Area: 596 sq m.	No action required for development. Remove and replant as part of on-going site management.	Retained for screening.
G4	Mixed species <i>(Mixed species)</i>	9.5	300	Height (m): 9.5 Stem Diam(mm): 300 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 3 Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Semi Mature	C1,2	Roadside group in good condition. Low over highway. Providing screening to site.	Area: 1130 sq m.	Remove roadside edge trees.	To give visibility splay to the south of the entrance.
G5	Mixed species <i>(Mixed species)</i>	12	300	Height (m): 12 Stem Diam(mm): 300 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 2 Life Stage: Young Rem. Contrib.: 10+ Years	Young	C1,2	Roadside group encroaching over highway. Mostly self seeded trees of poor form. The group moderately screens the site buildings.	Area: 786 sq m.	Remove.	To give visibility splay to the north of the entrance.
G6	Leyland cypress x13 <i>(X Cuprocyparis leylandii)</i>	11	300	Height (m): 11 13 stems, avg.(mm): 300 Spread (m): 4N, 4E, 4S, 4W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	C1,2	Line of trees.	Radius: 3.6m. Area: 139 sq m.	Remove roadside edge tree/s.	To give visibility splay to the north of the entrance.
G7	Mixed species <i>(Mixed species)</i>	10	300	Height (m): 10 Stem Diam(mm): 300 Spread (m): 4N, 4E, 4S, 4W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Early Mature	B2	Remnant corner of woodland, large stem diameter goat willow. Silver birch and common ash present.	Area: 1343 sq m.	Partial removal.	Roadside edge retained for screening.

Tree ID	Species	Height (m)	Stem diameter(s) (mm)	All Measurements	Life Stage	Retention Category	General Observations	RPA	Recommendations	Rationale
G8	Mixed species (Mixed species)	12	400	Height (m): 12 Stem Diam(mm): 400 Spread (m): 4N, 4E, 4S, 4W Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Semi Mature	B2	On bank next to track.	Area: 2001 sq m.	Partial removal.	Trackside edge retained for screening.
G9	Mixed species (Mixed species)	10	250	Height (m): 10 Stem Diam(mm): 250 Spread (m): 3N, 3E, 3S, 3W Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Semi Mature	C2	Low value tree regeneration.	Radius: 3.0m. Area: 5049 sq m.	Partial removal.	Trackside edge retained for screening.
G10	Mixed species (Mixed species)	12	400	Height (m): 12 Stem Diam(mm): 400 Spread (m): 3N, 3E, 3S, 3W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Early Mature	B1,2	Large group of mostly <i>Salix caprea</i> . Natural regeneration within group.	Area: 2283 sq m.	Partial removal.	Edge retained for screening.
G11	Mixed species (Mixed species)	10	330	Height (m): 10 Stem Diam(mm): 330 Spread (m): 2N, 2E, 2S, 2W Life Stage: Semi Mature Rem. Contrib.: 20+ Years	Semi Mature	B1,2	Group of trees with fence line through the centre. Possibly half privately owned. Mostly <i>Salix caprea</i> .	Area: 746 sq m.	No action required.	Retained for screening.
G12	Mixed species (Mixed species)	12	400	Height (m): 12 Stem Diam(mm): 400 Spread (m): 5N, 5E, 5S, 5W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	C2	Line of trees along the site boundary.	Radius: 4.8m. Area: 1370 sq m.	No action required.	Retained for screening.
G13	Goat willow (<i>Salix caprea</i>)	8	150	Height (m): 8 Stem Diam(mm): 150 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 1 Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Semi Mature	C2	Natural regeneration on disturbed ground.	Area: 12159 sq m.	Partial removal.	Section retained for screening from the east.
G14	Goat willow x100 (<i>Salix caprea</i>)	10	250	Height (m): 10 100 stems, avg.(mm): 250 Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 1 Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	C2	Natural regeneration.	Area: 4610 sq m.	Remove.	To facilitate quarrying.
G15	Mixed species (Mixed species)	12	200	Height (m): 12 Stem Diam(mm): 200 Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 4 Life Stage: Semi Mature Rem. Contrib.: 20+ Years	Semi Mature	B2	Self set trees between the boundary fence and road edge. Includes ash, hawthorn, hazel, and sycamore. Some ash have significant symptoms of Chalara ash dieback. Branches to 4 m over road.	Area: 380 sq m.	No action required.	Retained for screening.

Tree ID	Species	Height (m)	Stem diameter(s) (mm)	All Measurements	Life Stage	Retention Category	General Observations	RPA	Recommendations	Rationale
G16	Mixed species (Mixed species)	12	350	Height (m): 12 Stem Diam(mm): 350 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 2 Life Stage: Early Mature Rem. Contrib.: 20+ Years	Early Mature	B2	Line of trees along the boundary. Ash in decline due to Chalara ash dieback.	Radius: 4.2m. Area: 600 sq m.	Partial removal.	To facilitate access route.
G17	Mixed species (Mixed species)	12	250	Height (m): 12 Stem Diam(mm): 250 Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 1 Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	C2	—	Area: 8271 sq m.	Partial removal.	To facilitate quarrying.
G18	Mixed species (Mixed species)	7	150	Height (m): 7 Stem Diam(mm): 150 Spread (m): 2N, 2E, 2S, 2W Life Stage: Young Rem. Contrib.: 10+ Years	Young	C2	Natural regeneration.	Area: 4245 sq m.	No action required.	Incorporate into biodiversity enhancement area.
G19	Mixed species (Mixed species)	7	150	Height (m): 7 Stem Diam(mm): 150 Spread (m): 2N, 2E, 2S, 2W Life Stage: Young Rem. Contrib.: 10+ Years	Young	C2	Natural regeneration.	Area: 893 sq m.	Remove.	To facilitate quarrying.
G20	Norway spruce (Picea abies)	12	300	Height (m): 12 Stem Diam(mm): 300 Spread (m): 3N, 3E, 3S, 3W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	B2	Plantation on private land.	Area: 3465 sq m.	No action required.	No action.
G21	Mixed species (Mixed species)	5	150	Height (m): 5 Stem Diam(mm): 150 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 0 Lowest Branch (m): 0(M) Life Stage: Young Rem. Contrib.: 10+ Years	Young	C2	Large group of low value self-set trees and shrubs.	Area: 867 sq m.	No action required.	Retained for screening.
G22	Mixed species (Mixed species)	7	200	Height (m): 7 Stem Diam(mm): 200 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 0 Lowest Branch (m): 0(M) Life Stage: Mature Rem. Contrib.: <10 years	Mature	C2	Group of rowan, hawthorn, sycamore, goat willow and ash. Growing either side of the boundary wall. Mostly older declining specimens, some of which have died. Ash heavily affected by Chalara ash dieback. Most stems leaning on wall causing damage. Compaction of the ground (track side) due to vehicles.	Area: 448 sq m.	Partial removal.	To facilitate access route.
H1	Mixed species x100 (Mixed species)	2	100	Height (m): 2 100 stems, avg.(mm): 100 Spread (m): 1N, 1E, 1S, 1W Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Semi Mature	C2	Suckered hedge.	Radius: 1.2m. Area: 163 sq m.	No action required.	No action.

Tree ID	Species	Height (m)	Stem diameter(s) (mm)	All Measurements	Life Stage	Retention Category	General Observations	RPA	Recommendations	Rationale
H2	Mixed species (Mixed species)	6	150	Height (m): 6 Stem Diam(mm): 150 Spread (m): 2N, 2E, 2S, 2W Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	C2	Untidy unmanaged hedge.	Radius: 1.8m. Area: 788 sq m.	No action required.	No action.
H3	Mixed species (Mixed species)	4	80	Height (m): 4 Stem Diam(mm): 80 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 1 Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	C2	Lapsed management.	Radius: 1.0m. Area: 75 sq m.	No action required.	No action.
T1	Sycamore (Acer pseudoplatanus)	14	850#	Height (m): 14 Stem Diam(mm): 850# Spread (m): 7N, 7E, 7S, 7W Life Stage: Mature Rem. Contrib.: 20+ Years	Mature	B1,2	Boundary tree.	Radius: 10.2m. Area: 327 sq m.	No action required.	No action.
T2	Sycamore (Acer pseudoplatanus)	14	600	Height (m): 14 Stem Diam(mm): 600 Spread (m): 7N, 7E, 7S, 7W Life Stage: Mature Rem. Contrib.: 20+ Years	Mature	B2	Private tree on site boundary.	Radius: 7.2m. Area: 163 sq m.	No action required.	No action.
0090	Sycamore (Acer pseudoplatanus)	12	460	Height (m): 12 Stem Diam(mm): 460 Spread (m): 4N, 4E, 4S, 3W Crown Clearance (m): 2.5 Lowest Branch (m): 2.5(E) Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	B2	Healthy tree growing next to boundary wall. Root flare and adaptive growth indicates root or stem base obstruction due to wall. No significant defects	Radius: 5.5m. Area: 95 sq m.	No action required.	No action.
0091	Sycamore (Acer pseudoplatanus)	12	380	Height (m): 12 3 stems, avg.(mm): 380 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 1 Lowest Branch (m): 1.5(W) Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	B2	Healthy tree with multiple stems from base. Included bark junctions at stem base decrease future potential. North stem growing up against boundary wall.	Radius: 7.9m. Area: 196 sq m.	No action required.	No action.
1661	Common ash (Fraxinus excelsior)	14	420	Height (m): 14 4 stems, avg.(mm): 420 Spread (m): 4N, 3E, 6S, 1W Crown Clearance (m): 6 Life Stage: Early Mature	Early Mature	U	Significant symptoms of Chalara ash dieback resulting in a moribund tree.	Radius: 10.1m. Area: 320 sq m.	No action required. Remove as part of on-going site management.	No action.
1662	Common ash (Fraxinus excelsior)	14	1020	Height (m): 14 Stem Diam(mm): 1020 Spread (m): 6N, 6E, 8S, 8W Life Stage: Mature Rem. Contrib.: 10+ Years	Mature	B1,2	An open-grown tree with symptoms of Chalara ash dieback. Ivy is present on the tree.	Radius: 12.2m. Area: 468 sq m.	No action required.	No action.

Tree ID	Species	Height (m)	Stem diameter(s) (mm)	All Measurements	Life Stage	Retention Category	General Observations	RPA	Recommendations	Rationale
1663	Common ash (<i>Fraxinus excelsior</i>)	14	950	Height (m): 14 Stem Diam(mm): 950 Spread (m): 7N, 7E, 7S, 7W Crown Clearance (m): 5 Lowest Branch (m): 3(W) Life Stage: Mature Rem. Contrib.: <10 years	Mature	C1,2	Heavily affected by Chalara ash die back. Large diameter deadwood over the highway up to 100 mm diameter.	Radius: 11.4m. Area: 408 sq m.	No action required.	No action.
1664	Common ash (<i>Fraxinus excelsior</i>)	20	800	Height (m): 20 Stem Diam(mm): 800 Spread (m): 6N, 6E, 6S, 6W Crown Clearance (m): 5 Life Stage: Mature Rem. Contrib.: <10 years	Mature	U	Significant symptoms of Chalara ash dieback. Cavities in low branches.	Radius: 9.6m. Area: 290 sq m.	No action required. Remove as part of on-going site management following ecology check of cavities.	No action.
1665	Common ash (<i>Fraxinus excelsior</i>)	15	560	Height (m): 15 2 stems, avg.(mm): 560 Spread (m): 4N, 5E, 6S, 5W Crown Clearance (m): 6 Life Stage: Early Mature Rem. Contrib.: 10+ Years	Early Mature	B1,2	Multi-stemmed tree next to highway. Good condition with minimal signs of Chalara ash dieback.	Radius: 9.5m. Area: 284 sq m.	No action required.	No action.

Tree ID	Species	Height (m)	Stem diameter(s) (mm)	All Measurements	Life Stage	Retention Category	General Observations	RPA	Recommendations	Rationale
1666	Common ash (<i>Fraxinus excelsior</i>)	14	500#	Height (m): 14 2 stems, avg.(mm): 500# Spread (m): 2N, 4E, 4S, 3W Crown Clearance (m): 3 Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Semi Mature	B1	Roadside tree with evidence of Chalara ash dieback. Overhanging the highway.	Radius: 8.5m. Area: 227 sq m.	No action required.	No action.
1667	Common ash (<i>Fraxinus excelsior</i>)	13	590	Height (m): 13 Stem Diam(mm): 590 Spread (m): 7N, 7E, 7S, 7W Crown Clearance (m): 5 Life Stage: Mature Rem. Contrib.: 10+ Years	Mature	B2	Symptoms of Chalara ash dieback can be seen. Ivy is present on the tree.	Radius: 7.1m. Area: 158 sq m.	No action required.	No action.
Key:										
Tree ID:-			Number given to the individual tree or group.							
Crown Spreads:-			Distance in meters from the stem of the tree to the edge of the canopy in the four cardinal directions.							
Diameter:-			Diameter of the trunk at 1.5 m above adjacent ground level. (mm) Multiple measurements indicate a multi-stemmed tree at 1.5 m.							
BS5837 categorization:-			1 = Arboricultural values; 2 = Landscape Values; 3 = Conservation and cultural values. 1, 2 or 3 = BS5837 category							
Age Class:-			Y = Young, recently planted with no viable seed production. SM = Semi-Mature, apical dominance with growth to normal crown dimensions for species and height. M = Mature, normal life expectancy with normal crown size for species and type and maximum seed production. LM = Late-mature, in natural decline. V = Veteran and A = Ancient, both (A and V) are as defined by Natural England.							
Tree number followed by #			Tree, Group or Woodland with no access therefore dimensions are approximate.							

Appendix 2 Survey Area and Drawings

Drawing D01A- Tree Constrains Plan - Overview

Site: Maes y Droell

Client: Stephenson Halliday

Surveyors: B. Knipe, D. Wolff-Geall

Survey Dates, 19.01.26, 16.06.26

Key:

- Category A
- Category B
- Category C
- Category U

Root Protection Area

Crown Spread and Category

Tree Number

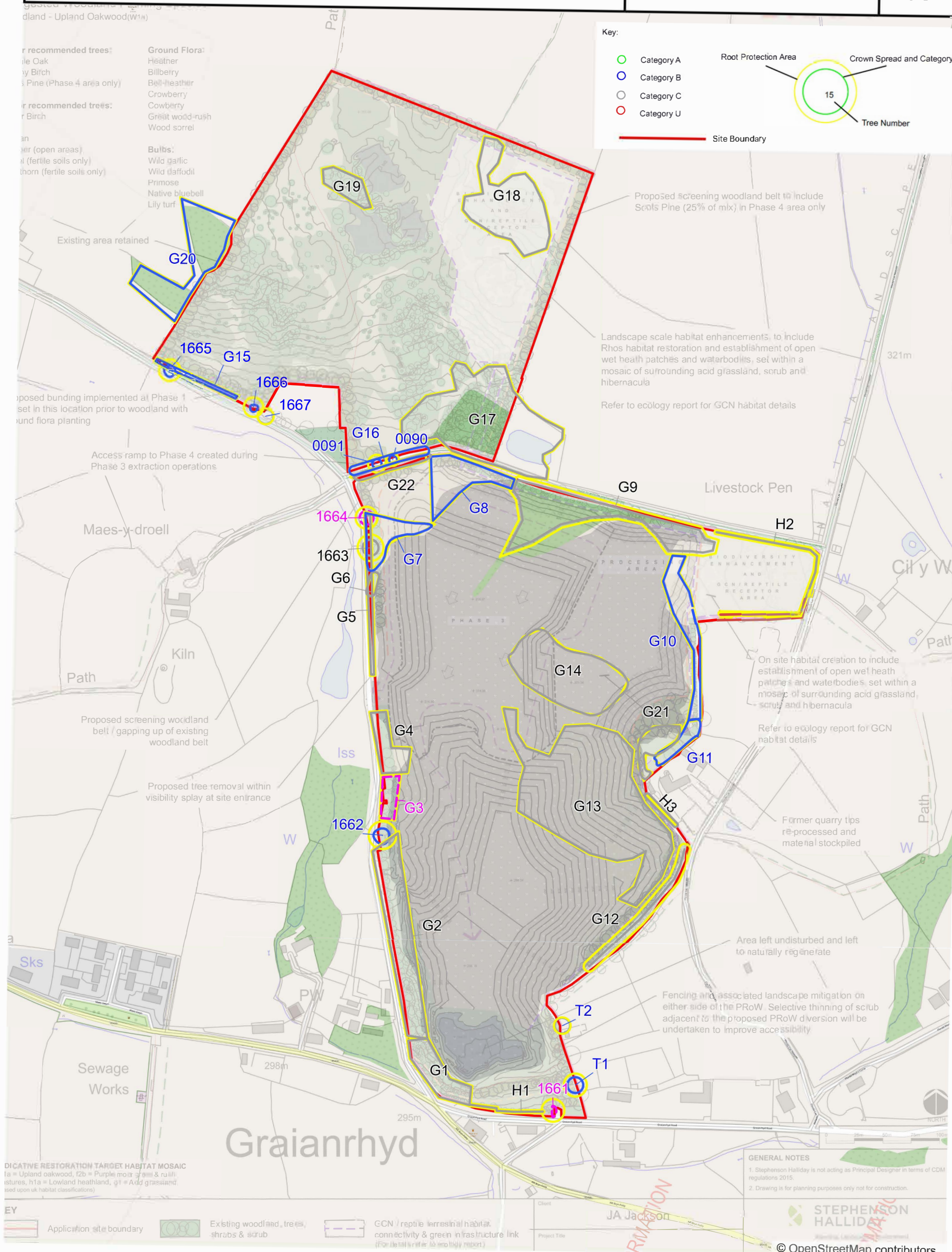
Site Boundary

Page size: A4

1 : 4,000

0 50 m 100 m











es: **Ground Flora:**
 Heather
 Bilberry
 Bell-heather
 Crowberry
 Cowberry
 Great wood-rush
 Wood sorrel

Bulbs:
 Wild garlic
 Wild daffodil
 Primrose
 Native bluebell
 Lily turf

area retained

G20

G19

BIO-DIVERSITY
 ENHANCEMENT
 AND
 GEN-REPTILE
 RECEPTOR
 AREA

G18

Landscape
 Rhos has
 wet heath
 mosaic
 hiberna

Refer to

plemented at Phase 1
 prior to woodland with

1665

G15

1666

1667

0091

G16

0090

G17

G22

G8

G9

Access ramp to Phase 4 created during
 Phase 3 extraction operations

laes-y-droell

1664

G7

1663

G6

G5

PHASE 3

G14

Key:





Heather
 Bilberry
 Call-heather
 Rowberry
 Cowberry
 Great wood-rush
 Wood sorrel

Flora:

Wild garlic
 Wild daffodil
 Primrose
 Lative bluebell
 Lily turf



Appendix 3 Glossary of Arboricultural Terms

<i>Term</i>	<i>Description</i>
<i>Amenity</i>	A positive attribute of the tree which contributes to the overall visual character or aesthetic enjoyment of an area.
<i>Ancient tree</i>	A tree in the final stage of its life, which is old relative to others of the same species, and which has biological, aesthetic, or cultural value because of its old age.
<i>Branch</i>	A division of another branch, or a subordinate division of a tree's stem.
<i>Bat Potential</i>	The potential for the tree to be used by bats based on visual evidence.
<i>Botanical Name</i>	Binomial plant name consisting of genus name and a species name
<i>Cambium (Vascular Cambium)</i>	An area of tissue under the bark (root, stem, or branch) which produces rows or rings of new cells, as part of secondary growth.
<i>Canopy</i>	Buds, shoots, and leaves supported by the crown, which provide benefits such as air cooling, direct shade, shelter, and water interception.
<i>Chlorosis</i>	Abnormal yellow or yellow-green colouration of normally green foliage. Due to inadequate chlorophyll development, linked to nutrient imbalance or root dysfunction.
<i>Common Name</i>	Common name used for the tree in the UK
<i>Coppice (Coppicing)</i>	Originally a cultural practice of stimulating rapid growth in the form of woody shoots by cutting the base of the trunk. This was repeated to harvest branch material.
<i>Crown</i>	All parts of a tree above the clear section of the stem, and includes branches, live foliage, and the upper portion of the primary stem(s) that support them and, therefore, contains part of the primary structure.
<i>Crown Clearance</i>	Height in metres of crown clearance above adjacent ground level (to inform ground clearance, crown stem ratio, and shading).
<i>Crown Lifting</i>	A pruning operation for the selective removal of lower branches from a tree crown to provide clearance or for light management.
<i>Crown Reduction</i>	A method of reducing the height and/or spread of a tree crown by making appropriate pruning (reduction) cuts.
<i>Crown Spread</i>	Distance from the centre of the stem to the crown edge. Usually specified as a single average distance or as four separate measurements for each cardinal points.
<i>Cultivar</i>	A specifically cultivated tree variety, which is bred to promote expression of desirable physical traits or characteristics.
<i>Dripline</i>	The perimeter of the crown as determined by the lateral extent of the foliage.
<i>Graft Union</i>	The point on a tree where the graft is joined to the rootstock or stem.

<i>Hazards</i>	Defects present on a tree which pose an unacceptable risk to persons or property.
<i>Height</i>	Total height in metres taken from ground level.
<i>Occlusion</i>	The overgrowth of a wound by callus tissue which has subsequently grown.
<i>Physiological Condition</i>	Health of the tree based on visual evidence, expressed as good, fair, poor, or dead
<i>Pollard (also Pollarding)</i>	Originally a cultural practice initiated on young trees to cyclically crop branches above the height of grazing animals. On amenity trees, pollarding can be a heavy reduction or removal of the primary structure to remove conflicts and disservices of a large crown. A pollarded tree will require management interventions (i.e., re-pollarding) for the rest of its lifespan.
<i>Primary Structure</i>	The supporting framework for the crown, being the trunk and weight-bearing stems, and branches to the point where they begin to divide.
<i>Recommendations</i>	Preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat.
<i>Root(ing) Zone</i>	The volume of soil occupied by the entire root system of a tree.
<i>Species</i>	the fundamental category of taxonomic classification, ranking below a genus or subgenus
<i>Stem</i>	single or multiple above-ground supporting axis of a tree, bearing branches and further sub-divisions
<i>Stem Diameter (DBH)</i>	(Diameter at breast height) Stem diameter in cm taken at 1.5 m above adjacent ground level (on sloping ground to be taken on the upslope side of the tree base) or immediately above the root flare for multi-stemmed trees.
<i>Structural Condition</i>	Integrity of the tree based on visual evidence, expressed as good, fair, or poor.
<i>Structural Roots</i>	Long-lived roots of large diameter (> 25 mm) which form the structural framework of the tree root system.
<i>SULE</i>	Safe Useful Life Expectancy is a professional assessment of the duration for which it is reasonably expected that a tree may be safely retained in its current context. However, the greater the life expectancy the less accurately it can be predicted.
<i>Target</i>	For risk assessment - the location or object which a tree or part may fall onto or damage.
<i>Tree ID</i>	Reference number, or tag number for an individual tree, or group of trees.
<i>Veteran Tree</i>	A tree of any age that has developed some of the habitat features typically found on ancient trees such as wood decay fungi, stem and branch cavities, and deadwood. These result from the tree's environment and/or outside impacts such as damage. Veteran trees are classified by their features and not age and are typically mature trees.

Appendix 4 Surveyor Qualifications

David Wolff-Geall

dave.wolff-geall@lowther.co.uk

	Arboricultural Consultant & Surveyor (contractor)
<i>Professional Qualifications:</i>	Level 4 Certificate in Arboriculture
	Professional Tree Safety Inspection qualification
	QTRA, Quantified Tree Risk Assessment
<i>Professional Experience:</i>	
<i>2015-Present</i>	Arboricultural Consultant & Surveyor
<i>2013-2015</i>	Arboricultural Climber/Team Leader
<i>Other Qualifications, Training Courses, and CPD:</i>	Certificate in Arboriculture Level 2
	Tree Architecture – Ancient Tree Forum
	Arborsonic 3D acoustic tomograph training
	Resi-PD Training
	CS42, CS41, CS40, CS39, CS38, CS301, CS47, CS30, CS31
	Subsidence workshop
	BS5837 Workshop
	C.A.T. Locator & Genny
	3 Day first aid plus F
	Woodchipper Units 1,2,3
	Manual Handling Level 2 for Managers
	CSCS for Workers
	Chapter 8 Traffic, lighting and signing



<i>Position in Company:</i>	Arboricultural Consultant & Manager
<i>Professional Qualifications:</i>	Professional Member of the Arboricultural Association MSc – Arboriculture and Urban Forestry BA (Hons) degree - Environmental Management Lantra Professional Tree Safety Inspection qualification QTRA, Quantified Tree Risk Assessment IOSH Managing Safely
<i>Professional Experience:</i>	
2015-Present	Lowther Forestry Group Ltd
2012-2015	National Trust, Woodland Ranger, Central & East Lakes
2007-2012	Area Ranger, National Trust, Windermere & Troutbeck
2011-2012	Head Warden, National Trust, Lyme Park
2003-2007	Warden, South Peak Estate
2000-2003	National Trust Warden (Staffs) & Patrol Ranger (Macclesfield Forest) Peak District National Park
<i>Other Qualifications, Training Courses, and CPD:</i>	Resi-PD Training Trees Planning and Construction Conference (2024) Applied Tree Biology – Arboricultural Association (AA) AA Surveying and Categorising Trees for BS:5837 AA Introduction to Soils Pesticides- PA1, PA6 C.A.T. Locator & Genny Off-road Driving (NPTC) Manual Handling Level 2 for Managers CSCS for Managers and SSSTS Peak District National Park Ranger Training

Appendix 5 Survey Methodology

The tree surveys are carried out in accordance with BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*. A glossary of arboricultural terms used in this report can be found in Appendix 3.

The trees are categorised in accordance with the cascade chart in Table 1 of BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*, page 9. Tree categorisation is the method by which a surveyor places a value on an individual tree, group, woodland, or hedge using the method described in BS5837: 2012. The method also considers the Safe Useful Life Expectancy (SULE) measured in numbers of years:

Quality Category	Life Expectancy
A – high quality	40+ years
B – moderate quality	20+ years
C – low quality	10+ years
U	<10 years: Unsuitable for retention

Category C is also used by default for trees or hedging plants with stems less than 150 mm diameter taken at 1.5 m. Category U trees cannot be realistically retained as living trees in the current land use due to serious, irremediable defects such as disease or mortality. However, Category U trees can still have conservation value and may be desirable to be preserved under the right circumstances.

Once these categories are established, the contextual attributes of a tree are then determined and come under one or more of the following three headings:

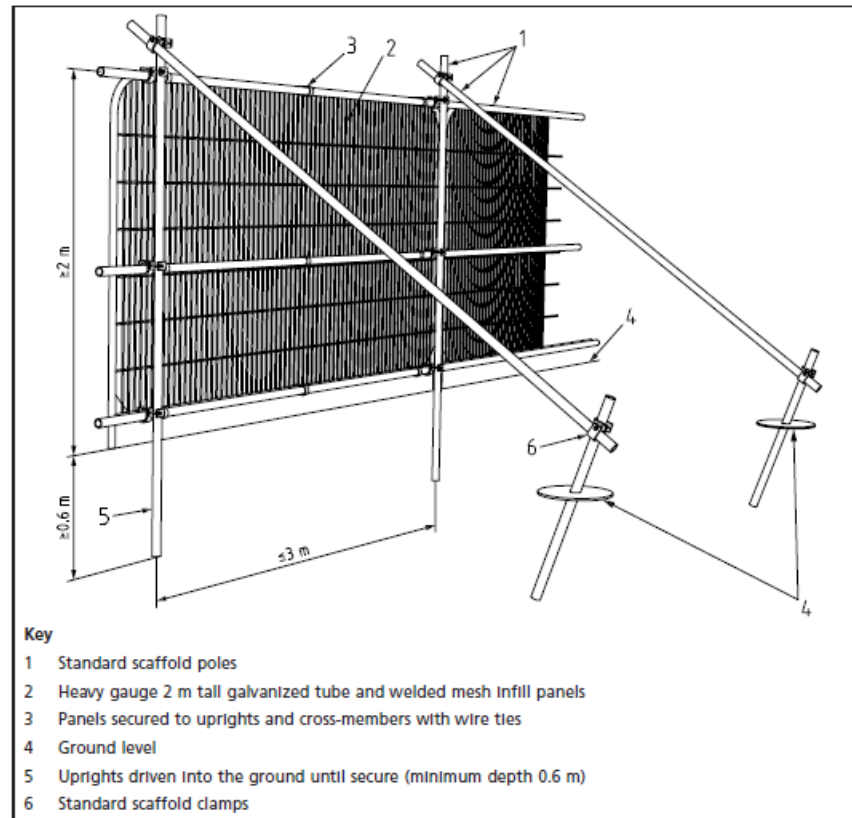
Value Category	Brief Description and Example	
1: Mainly arboricultural qualities	A	Rare, unusual, or good examples of their species. Essential components of tree features e.g., avenues.
	B	Lacking special quality due to storm damage, poor management, or defects, of which can be remedied.
	C	Unremarkable trees of limited merit.
2: Mainly landscape qualities	A	Trees of visual importance, including groups and woodlands.
	B	Trees present in numbers with a higher collective rating.
	C	Low or temporary landscape benefits from groups or woodlands.
3: Mainly cultural values, incl. conservation	A	Significant conservation, historical, or commemorative value.
	B	Material conservation or cultural value.
	C	No conservation or cultural value.

All trees, where accessible, are given unique identification numbers for that survey area which are listed on the Tree Data Table. In some cases, plastic tree tags are attached to the stems of individually recorded trees to aid with identification. Where access to the tree is restricted or within private ownership, the diameter will be approximate and distinguished on the Tree Data Table and drawings by a 'T' prefix.

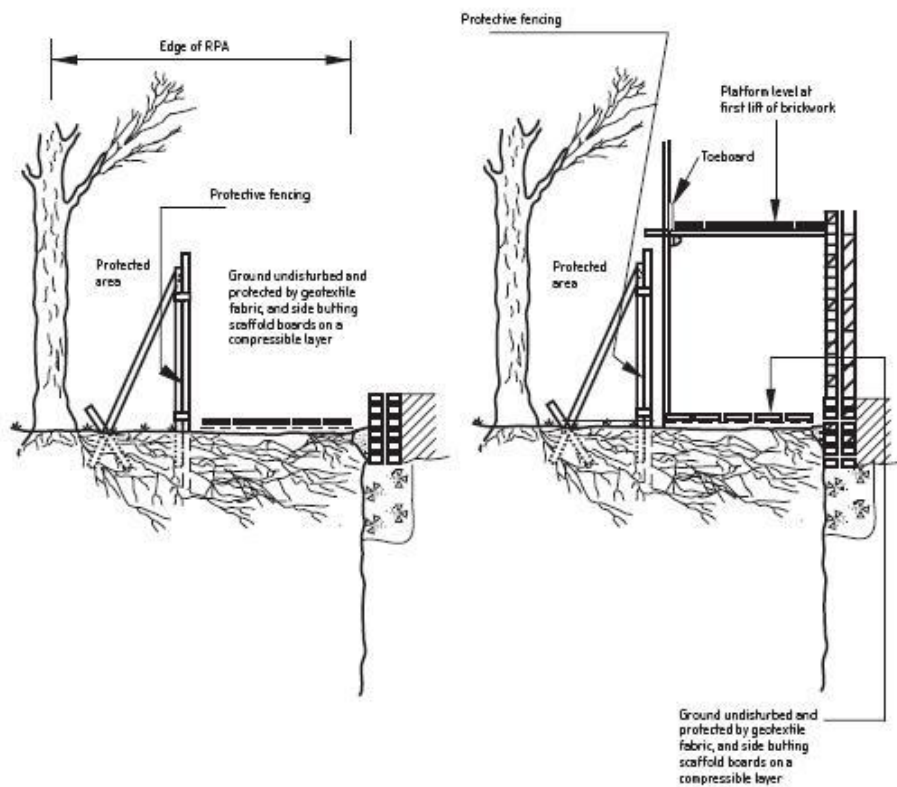
All measuring equipment is regularly checked and calibrated to ensure accuracy. All recommendations of tree works should be carried out to BS 3998: 2010 *Recommendations for Tree Work*.

Appendix 6 Example of root protection fencing

Figure 2 Default specification for protective barrier



Appendix 7 Examples of protection measures for working within the RPA



Appendix 8 Legal Restrictions

Trees in any location may be protected by legislation. Where development is proposed, additional legal protection may be appropriate and can be enforced by the local authority. Attention is drawn to legal controls and liabilities under common law for consideration at the earliest stages of potential site development.

Conservation Area

The Town and Country Planning Act 1990 dictates that local planning authorities have the power to protect areas of special architecture or historic value as Conservation Areas. Before carrying out works to any trees within a Conservation Area it is required to notify the LPA using a 'Section 211 Notice'. This requires a notice period of 6 weeks, unless trees fall under an exemption, such as being below 75 mm diameter at 1.5 m above ground level (GOV.UK, 2014).

Tree Preservation Orders (TPO)

A local planning authority holds the power to issue a Tree Preservation Order to trees, groups of trees, or woodlands where their preservation is considered a contribution to the local environment by their amenity value. Tree preservation regulations prohibit activities such as cutting, lopping, topping, uprooting, and wilful damage or destruction of protected trees (GOV.UK, 2014)

Prior to carrying out any tree works to TPO protected trees permission must be sought from and granted by the LPA.

If the LPA suspects an offence may have taken place, then they are granted powers under section 67 (9) of the Police and Criminal Evidence Act 1984 to investigate (GOV.UK, 2006).

Felling Licence

Even when no specific legal protection exists, it may be necessary to obtain a felling licence. A felling licence is required for the felling of relatively small volumes of wood (5 cubic metres may be felled in any calendar quarter without a licence, as long as no more than 2 are sold). It is an offence to fell trees without a licence if an exemption does not apply. Full details can be found on the Forestry Commission's webpages: [Tree felling licence: when you need to apply - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

Wildlife and Habitat

Before carrying out any arboricultural or forestry operations, consideration should be given to the following legislation for the protection of flora and fauna species:

- The Wildlife and Countryside Act 1981 (as amended) -provides protection to birds, their eggs, and nests, as well as protection of other animals and plants.
- Protection of Badgers Act 1992 – provides protections to badgers and their setts.
- The conservation of Habitats and Species Regulations 2010 – covers the designation and protection of sites and protected species.
- Countryside and Rights of Way Act 2000 and The Habitat Regulation 2009 – provides protection to bats and their roots.

Hedgerows

Under the Management of Hedgerows (England) Regulations 2024 a hedgerow may be protected if it meets the following criteria:

- Length - more than 20m long with gaps of less than 20m in length.
- Location – see government website for full list.
- ‘Importance’ – See government website for further details.
-

[Countryside hedgerow protection: removing hedgerows - GOV.UK \(www.gov.uk\)](https://www.gov.uk/countryside-hedgerow-protection-removing-hedgerows)

The act also controls cultivation, pesticide, and fertilisers use within 2 m of the centre of a hedgerow and prohibits the cutting or trimming of an important hedgerow between the 1st March and 31st August in the same year.

Highways and Footpaths

Requirements of the Highways Act 1980 dictate that trees, shrubs, or hedges should neither obstruct nor endanger highway users. The minimum clearance required should be 2.4 m over a footpath and 5.05 m over a road (measured from the centre line). Under section 154 of the act the highway authority has powers to issue a 14-notice to carry out works to cut back offending vegetation. Where the tree owner does not comply the highway authority may carry out the work itself and recover all costs they incur.

Appendix 9 Arboricultural Method Statement 1 – Working Procedures to Protect Trees During Development

This development has the potential to cause physical damage to retained trees within the site. Therefore, the following recommendations should be followed at all stages of this development:

- Carry out the recommended tree and group removal as specified in Appendix 1, Tree Survey Data Table, prior to development. All tree works should conform to BS 3998: 2010 *Recommendations for Tree Works*.
- Identify buffer zone distances from retained trees and install Construction Exclusion Zone fences where required.
- Use pedestrian access routes that ideally avoid soft ground within RPAs. If this cannot be avoided, then lay down suitable ground protection over the soft ground.
- Store building or waste materials outside of the RPAs and mix cement-based products at least 10 m away from the RPAs.
- Maintain protective fencing and buffer zones for the duration of the development, extraction, and restoration phases. Only when all need for machinery within an area has ceased should the CEZ fencing be removed to facilitate soft landscaping.

It is recommended to use signs on the CEZ fences informing site staff that the fences are for tree protection and must not be moved. It is also recommended to communicate this information during site inductions.

Appendix 10 References

1. British Standards Institution, (2010) *Recommendations for Tree Work*
2. British Standards Institution, (2012) *Trees in Relation to Design, Demolition and Construction – Recommendations*
3. Participation, E. (1981) Highways Act 1980, Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukpga/1980/66/section/154>
4. Participation, E. (2002) The control of Substances Hazardous to Health Regulations 2002, Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/uksi/2002/2677/contents>).
5. *The management of Hedgerows (England) Regulations 2024 (no date) Legislation.gov.uk.* Available at: <https://www.legislation.gov.uk/ukdsi/2024/9780348260472/part/2>
6. Participation, E. (2024) Town and Country Planning Act 1990, Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukpga/1990/8/schedule/7A>
7. *Tree Preservation Orders: A guide to the law and good Practice* (2006) Available at: <https://assets.publishing.service.gov.uk/media/5a790b1d40f0b679c0a08161/tposguide.pdf>
8. *Tree Preservation Orders and trees in conservation areas* (2006) GOV.UK. Available at: <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>
9. *Tree Preservation Orders and trees in conservation areas (2014)* GOV.UK. Available at: <https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas>
10. Woodland Trust (2011) *Ancient Tree Guide 3: Trees and Development*. Grantham, England: Woodland Trust.