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Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Arboricultural Impact Assessment

Quarry Farm
Oakenholt
Flintshire
CH6 5WH

Ref:P.1839.23

October 2023

Revision	Date	Description

Ascerta

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P.1839.23

Arboricultural Impact Assessment

**Quarry Farm
Oakenholt
Flintshire
CH6 5WH**

For

**Castle Green Homes
Unit 20
St Asaph Business Park
St Asaph
Denbighshire
LL17 0LJ**

July 2023

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Appendix 1 **Tree Data Tables in accordance with Table 1 of BS5837: 2012**

Appendix 2 **Drawing P.1839.23.T01 *Tree Survey***
 Drawing P.1839.23.T02 *Tree Constraints & Draft Protection*
 Drawing

EXECUTIVE SUMMARY

A survey of the existing trees on and adjacent Quarry Farm, Oakenholt, Flintshire, CH6 5WH has been carried out by a suitably qualified and competent Arboriculturist in accordance with British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*.

The purpose of the survey and of this report is to identify the impact of the proposed development of the site on trees, both within and immediately adjacent the site, in accordance with the provisions of BS5837: 2012.

The development of the site will involve the construction of 128 which will require the removal of a number of existing trees and in the absence of suitable controls, also has the potential to have an indirect impact on a number of the trees proposed for retention.

Mitigation for the impact of the development can be provided in the form of the following:

- The erection of protective fencing in advance of the commencement of the development to safeguard the root systems of retained trees;
- The agreement, in advance of the commencement of the development, together with the implementation during the construction phase, of an Arboricultural Method Statement; and
- The use of geotextiles and a 'no-dig' construction methodology where proposed hard surfaces overlap with root protection areas.
- Arboricultural site supervision where works are proposed within and immediately adjacent root protection areas.

Compensation for the impact of the development, together with landscape and biodiversity enhancements can be achieved by way of the following:

- The planting of trees, shrubs and where applicable hedges as part of a comprehensive landscape scheme to replace any vegetation lost and to integrate the development into the wider landscape; and
- The use of a mixture of native and ornamental species within planting schemes, where those species are suited to the site and local landscape.

1.0 Introduction

- 1.1 Ascerta has been instructed to carry out a survey of the trees within and immediately adjacent Quarry Farm, Oakenholt, Flintshire, CH6 5WH and to assess the potential impact of the development as proposed on trees within / adjacent the site in accordance with British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*.
- 1.2 The site was visited on 5th July 2023 by Helen Millner, a competent and qualified arboriculturist with experience of the UK and European arboricultural and landscape industries within the context of the planning system. During the site visit, a survey was carried out of the trees growing both on and immediately adjacent the site to the standards contained within BS5837: 2012. This report presents the results of the survey, provides an assessment of the impact of the development and includes recommendations for further actions, where applicable, to mitigate any potentially negative effects of the development on tree cover within the local landscape.

2.0 Objectives

- 2.1 Our client's objective is to develop the site by the construction of 128 residential dwellings.
- 2.2 Our objectives are as follows:
- Identify what arboricultural features exist presently within and adjacent the site and to record and categorise them in a manner consistent with BS5837: 2012;
 - Identify which trees will need to be removed directly as a result of the proposed development of the site;
 - Identify any indirect impact from the proposed development on trees proposed for retention;
 - Provide an indication of what protection measures can be implemented as part of the development of the site to ensure the physical protection of retained trees;
 - Provide recommendations for mitigation and compensation in terms of new planting or enhancement of existing features of arboricultural, landscape or ecological interest or importance; and
 - Provide any other recommendations to assist our clients in achieving their objectives whilst satisfying current legislation or policy guidance in relation to the woody vegetation on site.

3.0 Planning Policy & Relevant Legislation

- 3.1** Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, Minerals Technical Advice Notes (MTANs) and policy clarification letters comprise national planning policy.
- 3.2** The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties such as the Socio-economic Duty. A well-functioning planning system is fundamental for sustainable development and achieving sustainable places.
- 3.3** The site lies within the Flintshire County Council administrative area and is subject to the policies contained within its Local Plan, which have been considered when writing this report.
- 3.4** Checks have been made with the Local Planning Authority and using the DEFRA Magic Map resource. At the time of writing this report, the results of those checks are as follows:

Conservation Area:	N/A
Tree Preservation Order(s):	The Flintshire County Council (Community of Flint). TPO No. 211 (2010)- Land SW of the Old Quarry Farm. No. 213 (2010)- Land between Leadbrook Drive and Old Quarry Farm.
Ancient Woodlands:	N/A

Our searches are undertaken using Local Authority and Government interactive websites. However a thorough search should be completed prior to any works being carried out.

Irrespective of the above and the outcome of the planning application, in advance of the commencement of any works to trees within or adjacent the site however, those instructing and proposing to carry out such works should satisfy themselves that all appropriate consents are in place to prevent potential breach of legislation.

- 3.5** British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations* provides current recommendations and guidance on the relationship between trees and design, demolition and the construction processes. It sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures.
- 3.6** Notwithstanding the aforementioned policies and legislation, consideration should also be given to any impacts from the proposed development in respect of the Hedgerow Regulations 1997 and the Forestry Act 1967 (and specifically the potential need for a felling licence), as well as existing UK and European legislation relating to wildlife and nature conservation.

4.0 Survey & Survey Methodology

- 4.1** We have been supplied with a digital copy of the topographical survey for the site, which satisfies the relevant part of section 4.2 of BS5837: 2012 for the site. Features of arboricultural or landscape interest that have been excluded from the original plan (for example trees on or located off site but within a distance from the boundary of the site equal to or less than 12 times the stem diameter of that tree) have been added to the plan manually.
- 4.2** Our assessment of the soils within the site, based on local site conditions, geography, available soil maps and our own experience of soils across the United Kingdom, indicates that the soils on site are likely to contain a clay element. Any further details or confirmation of the exact nature of soil conditions on site will require further, more rigorous sampling and analysis. It is not however anticipated that the clay content will cause specific issues relating to retention of trees given the impact of the development proposals, providing that consideration is given to this aspect in advance of and during the construction phase of the development. Provision will need to be made for the protection of soil structure in key areas during the construction phase and the repair of any damage post construction. Further details are provided throughout this report and final details can be secured via planning condition.
- 4.3** Our survey of the trees within and adjacent the site was carried out by a qualified and competent arboriculturist in accordance with sections 4.4 and 4.5 of BS5837: 2012 on 5th July 2023 during overcast / light rain weather conditions. Those trees surveyed have been numbered sequentially, although for the purposes of this project they have not been tagged. The trees have also been categorised in accordance with section 4.5 and Table 1 of the Standard.
- 4.4** Where relevant and where the quality of shrub masses and hedges justifies recording, details have been recorded to the tree survey plan and tree data tables.
- 4.5** Where trees are surveyed that require immediate attention, for example to abate a nuisance, prevent a serious hazard to life or property, or are affected by a pathogen or pest that could cause widespread damage unless it is controlled, notification will be issued to the relevant person or organisation such that appropriate action can be taken.
- 4.6** Root Protection Areas for those trees surveyed have been calculated in accordance with the formulas within section 4.6 and Annex C of the Standard and can be found within the tree data tables that accompany this report. The tree data tables also contain a key to abbreviations used and the rationale for determining Root Protection Areas for groups of trees and woodlands (where applicable).

5.0 Survey Results & Impact Assessment

- 5.1 Existing Tree Cover:** Fourteen individual trees (T1-T14), three groups of trees (G1-G3), three hedges (H1-H3) and one woodland (W1) were recorded during our survey, the details of which can be found within Appendix 1 to this report and cross referenced with drawing P.1839.23.T01 *Tree Survey*.
- 5.2 Direct Impact on Trees:** The development of the site as proposed will directly require the removal of a number of trees within the site, see P.1839.23 *Tree Data Tables* for details.
- 5.3 Landscape Compensation:** Compensation for the loss of trees and the impact on canopy cover can be provided by way of planting new trees at the landscape stage of the project. Where applicable, opportunities for new planting are indicated on the drawings accompanying this report. Given the nature of the proposals, the context of the site in the local landscape and the opportunities for new planting and landscaping, it is considered that in terms of canopy cover, the medium to long term impact of the development will be neutral.
- 5.4 Indirect Impact on Trees:** In the absence of suitable controls, the development may well have an indirect impact on a number of trees on and adjacent the site. Measures are therefore required during the construction phase, as described throughout this report and on supporting drawings, in order to safeguard retained trees for the long-term benefit of the landscape.
- 5.5 Hedgerows:** In accordance with the Hedgerow Regulations 1997, 'important' hedgerows (in the context of the Regulations) should not be removed without a Hedgerow Removal Notice issued by the relevant Local Authority, unless that removal is subject to an appropriate consent under the Town and Country Planning Act 1990. In this instance however, no hedgerows are proposed for removal to accommodate the development proposals, therefore there are no arboricultural implications associated with such work.
- 5.6 Potential Mitigation for Development Impacts:** Mitigation of the direct impacts from the development of the site can be provided in the form of the erection of protective fencing as indicated on the attached drawings and the use of site specific actions adopting modern methods of construction as agreed and documented within an appropriate Arboricultural or Tree Protection Method Statement.

5.0 Survey Results & Impact Assessment (Continued)

- 5.7 Potential for Shading & Nuisance:** Mature trees in urban and suburban areas add significant value and environmental benefits to sites; however, it is acknowledged that some land / property owners are averse to retaining trees close to buildings and areas of public use because of shading and other potential nuisances (leaf / fruit drop for example). Whilst efforts can be made to minimise the impact from shading by trees, it is almost inevitable that in some situations, whether in the short term from existing trees or in the long term from new trees, trees will cast shade on parts of sites, whether that be buildings, garden / open space or other areas of general use during part of the day. Generally, any shade cast from trees will be for relatively short periods and entirely acceptable given the accepted co-existence of large trees in a development context. The acceptability or otherwise of shade is a somewhat subjective issue driven largely by land or property owner / occupier perceptions and in the majority of cases is not necessarily something that should be determined by a local planning authority. We do not consider in this case that shade will be excessive, or that any other ordinary circumstance arising from the presence of trees, for example from leaf or fruit drop, will constitute an unacceptable nuisance.
- 5.8 Boundary Screening:** Trees located adjacent to site boundaries generally make a welcome contribution to the screening of views, however in some cases there may be valid reasons for opening up views to enhance visibility, or to carry out additional planting to screen views. Where applicable, the drawings supporting this report indicate opportunities for management of boundaries in line with project aims and objectives.
- 5.9 Long Term Spatial Constraints:** The proposed layout has been designed to meet the standards set by the local planning authority as well as current best practice guidance. Where applicable, and subject to the possibility of an element of acceptable pruning, there should generally be adequate space between new buildings and trees to limit the potential for future pressure to remove trees. Acknowledgement should however be given to the fact that property owners are largely free to plant trees where they wish, therefore any requirement for future maintenance of existing or future vegetation should not be given any weight in the determining of this application. Whilst it is not possible to predict what actions future occupiers will seek to take in respect of trees within or adjacent sites, the existing layout, together with any vegetation management prescriptions either at this stage or in the future, is considered acceptable from a design perspective.
- 5.10 Existing Areas of Hard Standing:** There are no existing areas of hard standing to be removed on site, therefore there will be no arboricultural implications in this regard.

5.0 Survey Results & Impact Assessment (Continued)

- 5.11 Existing buildings/structures to be removed:** There are no buildings to be demolished and therefore there are no arboricultural implications associated to demolition.
- 5.12 Proposed Areas of Hard Standing:** Areas where proposed hard surfaces encroach within or are immediately adjacent root protection areas of retained trees are marked on the drawings appended to this report and the extent of precautionary measures required in order to safeguard retained trees are also indicated. The drawings also suggest appropriate measures for the safeguarding of retained trees, the final details for which should be agreed in advance and documented within a suitable Method Statement.
- 5.13 Proposed Buildings Located Adjacent / Within Root Protection Areas:** There are no areas within the proposed development where proposed buildings encroach within, or are located immediately adjacent to the Root Protection Areas of retained trees. There is therefore no need in this instance for special construction methodologies over and above the proposed arrangements for tree protection as outlined elsewhere in this report in order to safeguard trees from the impacts of construction works.
- 5.14 Proposed Drainage & Domestic Services:** At the planning application stage of the project, details of proposed drainage arrangements and provision of utility services are generally not known. During the installation process however, general guidance can be obtained from the National Joint Utilities Group Publication *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Volume 4* such as to minimise the impact of works on retained trees.
- 5.15 Working Space During the Construction Phase:** The site is of a size such that there will be adequate working space throughout the construction phase, with little if any potential impact on retained trees. However, it is essential that construction exclusion zones created to safeguard retained trees are not breached without prior consideration and implementation of control measures to limit any potentially negative impacts on trees.

5.0 Survey Results & Impact Assessment (Continued)

- 5.16 Access Facilitation Pruning:** There may be a limited number of areas within the site where an element of access facilitation pruning may be required, as indicated on the attached drawings. Providing that these works are controlled and carried out to a minimum of the standards as contained within BS3998: 2010 *Tree work – Recommendations*, then the visual impact of the work will be minimal and will not detract from the overall landscape value of the site. Our preliminary recommendations for arboricultural works are stated within the Tree Data Tables at Appendix 1 to this report.
- 5.17 Protection of Planting Areas:** It is often desirable to fence off areas that are to be newly planted to protect the soil structure for future planting; however, works will be required across the majority of the site, therefore there is little scope to set aside areas for such treatment. Provided that adequate provisions are made for ground preparations in advance of the landscape stage, there is unlikely to be a negative impact on the viability of newly planted stock.
- 5.18 Requirement for an Arboricultural Method Statement:** It would be beneficial to agree and implement a Method Statement for Tree Protection (an Arboricultural Method Statement) to ensure that retained trees are adequately protected from the outset and that no unnecessary harm occurs during the construction phase. Section 6 of this report contains further details of the aspects of the development that could successfully be controlled, which can in turn be subject to a suitably worded planning condition.
- 5.19 Planning for New Landscaping:** If not considered carefully at the design stage, new planting and landscaping can have an adverse impact on existing trees and cause long term problems for the built environment. Care should be taken in the design of new landscapes to prevent physical damage to retained trees during the planting process, and to ensure that schemes are designed to survive and thrive rather than compete for resources. Similarly, new trees and shrubs should not be planted where they will cause damage to structures, either directly or indirectly in the future. Table A1 at Annex A of the Standard gives advice on minimum distances for new trees from structures to avoid direct damage from future tree growth. Further advice should be sought from the project arboriculturist and a suitably qualified and experienced engineer as to the potential indirect impact of trees on structures in the long term (from clay shrinkage subsidence).

6.0 Tree Protection Measures

6.1 Based on the proposed layout and those trees proposed for retention, the drawings attached to this report show our preliminary recommendations for the physical protection of retained trees throughout the construction phase. The plans indicate the location of protective barriers, as well as the specification for construction of the protective fencing in accordance with Figures 2 & 3 of the Standard. These barriers will form construction exclusion zones around the retained trees.

6.2 In addition to the erection of protective fencing, the attached drawings show areas where it would be beneficial to agree a tree protection method statement between the project arboriculturist, design & construction teams and the local planning authority tree officer. The method statement will need to address and make allowance for the following:

- All forms of access required to the site;
- Site cabins and storage areas;
- Proposed parking for site personnel;
- Phasing of works;
- Space required for excavations (including foundation excavations);
- Any required special construction techniques (for example provision of porous surfaces);
- The location and construction methodology for installation of services in close proximity to retained trees & hedges;
- Any changes in ground levels and any resulting requirement for retaining structures;
- Proposed root zone enhancement measures;
- Working space for cranes, plant and scaffolding; and
- Management of waste products within the site.
- Protection of the soil structure within the proposed planted areas (where applicable);
- Planting operations within the root protection areas of retained trees;
- Any required / additional precautions outside of construction exclusion zones in relation to the treatment & landscaping of garden or open space areas;
- System of arboricultural site monitoring / schedule of site visits and resulting actions.

7.0 Summary of Impacts & Potential Mitigation Factors

7.1 Table 1 below summarises the impacts of the development as proposed on tree cover within and immediately adjacent the site. Comments are also provided on potential mitigation, compensation or special measures required to minimise the impact of the development and safeguard trees proposed for retention.

Table 1: Summary of the impacts of the development on trees within / adjacent the site.

Issue	Affecting	Mitigation / Compensation / Special Procedures
Trees / hedges to be removed	T4, T11 & Individual Ash trees from within W1 (due to poor health).	Appropriate compensation can be provided by way of new / replacement planting at the landscape stage of the project. Biodiversity enhancements can also be achieved through the landscape proposals.
Indirect physical impact on retained trees	All retained trees	Tree protection fencing should be erected to an agreed specification in advance of the commencement of the development. Key areas where works are proposed within or immediately adjacent root protection areas of retained trees should be subject to an Arboricultural Method Statement, agreed in advance as a condition of planning consent.
Provision of new hard surfaces	T2	Suitable construction methodologies are achievable, with the use of geotextiles / porous surfaces where applicable. Careful excavations with an element of root pruning when necessary. Works in this area to be overseen by project arboriculturist. Works in these areas of the site to be subject to a tree Arboricultural Method Statement.
Provision of drainage / services	Unknown	Where existing services cannot be utilised, NJUG principles must be adopted to and adhered to.
Access Facilitation Pruning	See P.1839.23 <i>Tree Data Tables</i>	All pruning works should be carried out to a minimum of the standards contained within BS3998: 2010 <i>Tree work – Recommendations</i> .
Protective Fencing	To be erected to an agreed specification in advance of the commencement of the development and retained in-situ throughout the course of the construction phase.	

7.2 On the basis of the above and the contents of this report, it is considered appropriate that an Arboricultural Method Statement be prepared to demonstrate how trees proposed for retention can be suitably safeguarded. The Arboricultural Method Statement can be secured by way of an appropriately worded planning condition attached to the consent for the development and should be adopted as a control document by site personnel.

8.0 Conclusions & Recommendations

- 8.1** The direct and indirect impacts on tree cover as a result of the development proposals are outlined within this report and mitigation proposed accordingly that seeks where possible to satisfy local and national planning guidance and policy. Where trees are proposed for removal, replacement planting should be undertaken as part of a landscape strategy for the site in line with local plan requirements and to integrate the development into the surrounding landscape. Arrangements for the safeguarding and physical protection of retained trees should be agreed and implemented in a manner consistent with current best arboricultural management practices to minimise any potentially negative effects on long term tree cover.
- 8.2** We recommend that the landscape proposal prepared for the site includes, where feasible, provision for the planting of a mixture of native as well as ornamental trees, shrubs and hedges, implemented as a condition of planning consent. We also recommend that tree protection measures are implemented in accordance with finalised versions of the drawings appended to this report and that an Arboricultural Method Statement be prepared and implemented to safeguard those trees proposed for retention.

9.0 References

Planning Policy Wales;


British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*;

National Joint Utilities Group Publication *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Volume 4*.

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Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Appendix 1

Site:	Quarry Farm, Oakenholt, Flintshire	Surveyor:	Helen Millner	 Landscape Trees Ecology
Client:	Castle Green Homes	Survey Date:	05-Jul-2023 12:02	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Overcast/light rain	

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat
				(m)	N	S	E	W							Grade
H1	Hawthorn, Blackthorn, Privet, Elder	2	<150-200	3.00	1.5	1.5	1.5	1.5	0.0	M	Good	Form and condition typical of tree species. Managed boundary hedge.	Hedge flailing to continue to retain a managed boundary feature.	40+	B2
H2	Hawthorn, Blackthorn, Privet, Hazel, Elder, Dog Rose	2	<150-200	3.00	1.5	1.5	1.5	1.5	0.0	M	Good	Form and condition typical of tree species. Managed boundary hedge.	Hedge flailing to continue to retain a managed boundary feature.	40+	B2
T1	Oak	8.5	#700	8.40	5.0	6.0	5.0	5.5	2.0	M	Good	Form and condition typical of tree species. Tree stem located within H2 hedgerow. Densely Ivy Clad, limiting inspection. Small deadwood throughout canopy. Good vigour.	Sever / remove Ivy and re-inspect.	30+	B1
T2	Oak	10.5	#680	8.16	8.0	6.5	6.5	7.0	2.0	M	Good	Form and condition typical of tree species. Tree stem located within H2 hedgerow. Densely Ivy Clad, limiting inspection. Large hanging deadwood over site. Balanced form.	Remove hanging / unstable deadwood. Crown lift to 4m over site. Sever / remove Ivy and re-inspect.	30+	B1
T3	Oak	8.5	#570	6.84	7.0	7.0	6.0	6.5	2.0	M	Good	Form and condition typical of tree species. Tree stem located within H2 hedgerow. Ivy severed and dying back. Balanced form. Good vigour.	Crown lift to 4m over site.	30+	B1


NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
 Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
 Ht Crown Clearance: Canopy ground clearance
 Structural Condition: Description of any observed defects
 Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
 Root Protection Area Radius: Root Protection Area as per BS5837: 2012
 Age Class: Y = Young, EM = Early Mature, M = Mature, OM = Over mature, D = Dead
 Preliminary Recommendations: Made in respect of known / intended use of the site
 * For groups of trees, the stem diameter of the largest tree in the group is generally used
 # Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
 Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
 P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
 Est. (yrs): Estimated remaining contribution in years

Site:	Quarry Farm, Oakenholt, Flintshire	Surveyor:	Helen Millner	 Landscape Trees Ecology
Client:	Castle Green Homes	Survey Date:	05-Jul-2023 12:02	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Overcast/light rain	

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat
				(m)	N	S	E	W							Grade
T4	Sycamore	11.5	#950	11.40	6.0	6.5	5.5	6.0	2.0	M	Fair /Poor	Ivy colonised stem. Tree stem located within H2 hedgerow. Major / large cavity at base on the western side of stem, cavity / hollow extends upwards within into main stem to approx. 2m. Associated decay. Large, hollowed branch failure at 2m (west). Reduced vigour and sign of dieback from upper most canopy.	Remove due to poor structural / health condition.	<20	B1 /C1
G1	Ash, Oak, Elder, Privet	6.5	#150-300	4.02	2.0	3.0	3.0	2.0	0.0	EM /M	Fair	Large deadwood within x2 Oaks adjacent to boundary gate. Both Oaks also exhibiting reduced / decline vigour, large deadwood present over roadside.	X2 Oaks within group. Remove unstable deadwood and retain has habitat feature.	20+ /30+	C2
W1	Ash, Oak	12.0	#300-650	7.52	6.0	7.5	6.0	6.5	1.5	M	Fair	Symptoms of Ash Die Back Disease present within all Ash trees. Young fruiting bracket of <i>Inonotus hispidus</i> present on x1 Ash within upper scaffold limb with associated decay. Large deadwood and decay cavities throughout woodland. Stems wounds and surface root damage evident due to previous farming site use. Hawthorn hedge 1m, within understory. Some individual trees are subject to TPO	Woodland management plan recommended. Make safe all unstable deadwood. Remove the affected Ash trees exhibiting symptoms of Ash Die Back Disease.	<30	B2 / B3

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
 Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
 Ht Crown Clearance: Canopy ground clearance
 Structural Condition: Description of any observed defects
 Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
 Root Protection Area Radius: Root Protection Area as per BS5837: 2012
 Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
 Preliminary Recommendations: Made in respect of known / intended use of the site
 * For groups of trees, the stem diameter of the largest tree in the group is generally used
 # Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
 Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
 P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
 Est. (yrs): Estimated remaining contribution in years

Site:	Quarry Farm, Oakenholt, Flintshire	Surveyor:	Helen Millner
Client:	Castle Green Homes	Survey Date:	05-Jul-2023 12:02
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Overcast/light rain

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat
					N	S	E	W							Grade
T5	Oak	7.0	#610	7.32	4.0	6.0	5.5	6.0	2.0	M	Fair	Ivy colonised stem. Not limiting inspection. Small deadwood throughout canopy. Good vigour.	Remove unstable deadwood. Crown lift to 4m over site.	30+	B1
H3	Blackthorn, Hawthorn, Hazel, Elder, Dog Rose	2.0	<150-200	3.00	1.5	1.5	1.5	1.5	0.0	EM	Good	Form and condition typical of tree species. Managed boundary hedge. Gappy in parts.	Hedge flailing to continue to retain a managed boundary feature.	40+	B2
T6	Oak	12.5	#580	6.96	8.0	7.0	8.0	5.0	2.0	M	Good	Form and condition typical of tree species. Tree stem located within H3 hedgerow. Co-dominant stem at 2.5m forming a canopy bias to East. Good vigour.	Crown lift to 4m over site.	40+	B1
T7	Oak	6.0	#320	3.84	4.5	3.5	3.0	3.0	2.0	EM / M	Fair	Form and condition typical of tree species. Tree stem located within H3 hedgerow. Squat form.	No work required at this time.	30+	C1
T8	Oak	7.5	#360	4.32	2.5	4.5	4.0	4.0	2.0	EM / M	Fair	Tree stem located within H3 hedgerow. Canopy bias to south / canopy bias away from the smaller adjacent dead / dying Oak.	No work required at this time.	30+	B1
T9	Oak	5.0	#360	4.32	4.5	4.5	3.5	4.0	2.0	EM / M	Fair	Tree stem located within H3 hedgerow. Squat form. Good vigour. Epicormic growth within upper canopy / crown spread.	No work required at this time.	30+	C1

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
Ht Crown Clearance: Canopy ground clearance
Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
Root Protection Area Radius: Root Protection Area as per BS5837: 2012
Age Class: Y = Young, EM = Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
Est. (yrs): Estimated remaining contribution in years

Site:	Quarry Farm, Oakenholt, Flintshire	Surveyor:	Helen Millner
Client:	Castle Green Homes	Survey Date:	05-Jul-2023 12:02
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Overcast/light rain

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat
				(m)	N	S	E	W							Grade
G2	Goat willow	6.0	Ave200	4.80	4.0	4.0	4.0	4.0	1.0	EM /M	Fair	Form and condition typical of tree species. Good vigour.	No work required at this time.	<30	C1
T10	Oak	5.5	#620	7.44	4.0	4.5	4.0	4.0	1.0	M	Fair	Form and condition typical of tree species. Ivy clad. Located on eastern side of stream. Good vigour.	No work required at this time.	30+	C1
T11	Ash	11.5	#400	4.80	4.0	6.0	6.0	5.0	3.0	M	Fair /Poor	Ivy colonised stem. Stem bulge at 0.5m to South and North. Large cavity at base with associated decay. Exhibiting sign and symptoms of Ash Die Back Disease. Located on the western side of stream.	Remove due to poor condition. Ownership of tree to be determined.	<20	C1
G3	Grey willow	5.5	Ave200	2.40	3.0	3.0	3.0	3.0	1.0	EM /M	Fair	Form and condition typical of tree species. Located on the eastern side of stream.	No work required at this time.	<30	C2
T12	Oak	8.5	#800	9.60	5.0	6.5	6.0	6.0	1.0	M	Fair	Good vigour. Co-dominant at 2m. Some decay present at Union. Dense Epicormic growth throughout canopy. Balanced canopy. Deadwood throughout.	Monitor biannually for further deterioration / movement within union.	30+	B1
T13	Oak	8.0	#400	4.80	4.0	4.5	3.5	3.0	1.0	M	Good	Good vigour. Co-dominant at 3m. Balanced form. Crack to upper side of southern main scaffold limb. Occluded. Epicormic throughout canopy. Located to eastern side of stream.	Crown reduction to minimise end weight of southern main scaffold limb and to create an overall balanced form.	30+	B1


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 Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
 Preliminary Recommendations: Made in respect of known / intended use of the site
 * For groups of trees, the stem diameter of the largest tree in the group is generally used
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 P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
 Est. (yrs): Estimated remaining contribution in years

Site:	Quarry Farm, Oakenholt, Flintshire	Surveyor:	Helen Millner	 Landscape Trees Ecology
Client:	Castle Green Homes	Survey Date:	05-Jul-2023 12:02	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Overcast/light rain	

T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat
				(m)	N	S	E	W							Grade
T14	Oak	16.0	940	11.28	4.5	8.0	6.0	10.0	4.5	M/OM	Fair /Poor	Significant deadwood at lower canopy. Appears to be in decline / small leaves / chlorotic leaf colour. Epicormic growth throughout canopy. Dieback from branch tips. Old Wall embedded into stem at tree base. Subject to TPO	Monitor biannually for further deterioration.	<20	B1 / C1

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

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Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

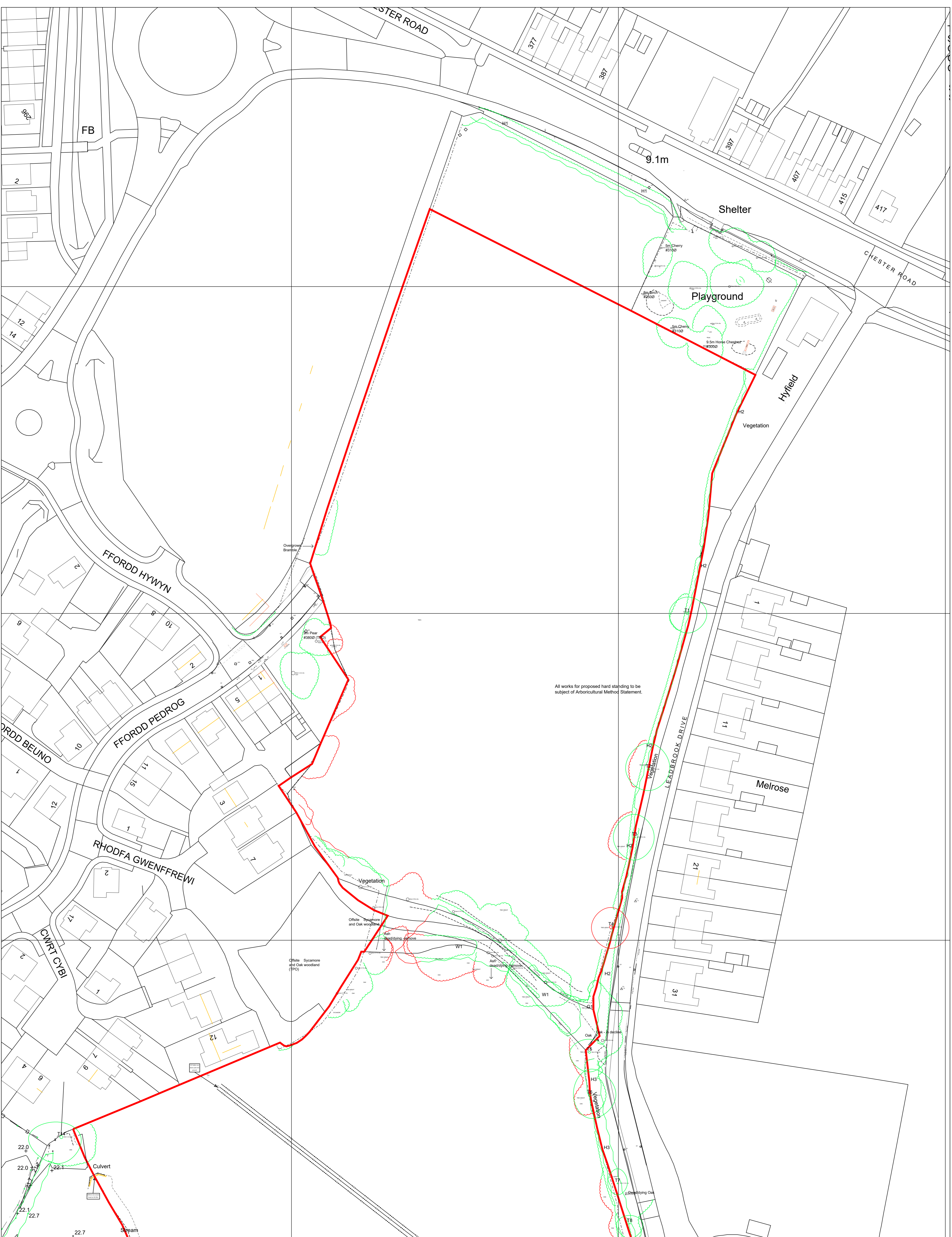
Species: Common name used
Root Protection Area Radius: Root Protection Area as per BS5837: 2012
Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
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Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Appendix 2



Ascerta
Landscape | Trees | Ecology

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Web: www.landscapetreeseecology.com

CLIENT:
Castle Green Homes

PROJECT:
Quarry Farm, Oakenholt, Flint CH6 5WH

DRAWING TITLE:
Tree Survey (Sheet 1 of 2)

SCALE: 1:500 @A1
DATE: 10/07/2023

DRAWN BY: CP
CHKD BY: HM

DRAWING No: P.1839.23.T01

REV: -

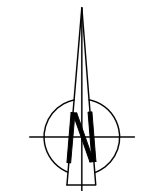
KEY

- Existing tree to be retained
- Existing tree to be removed

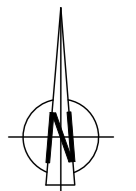
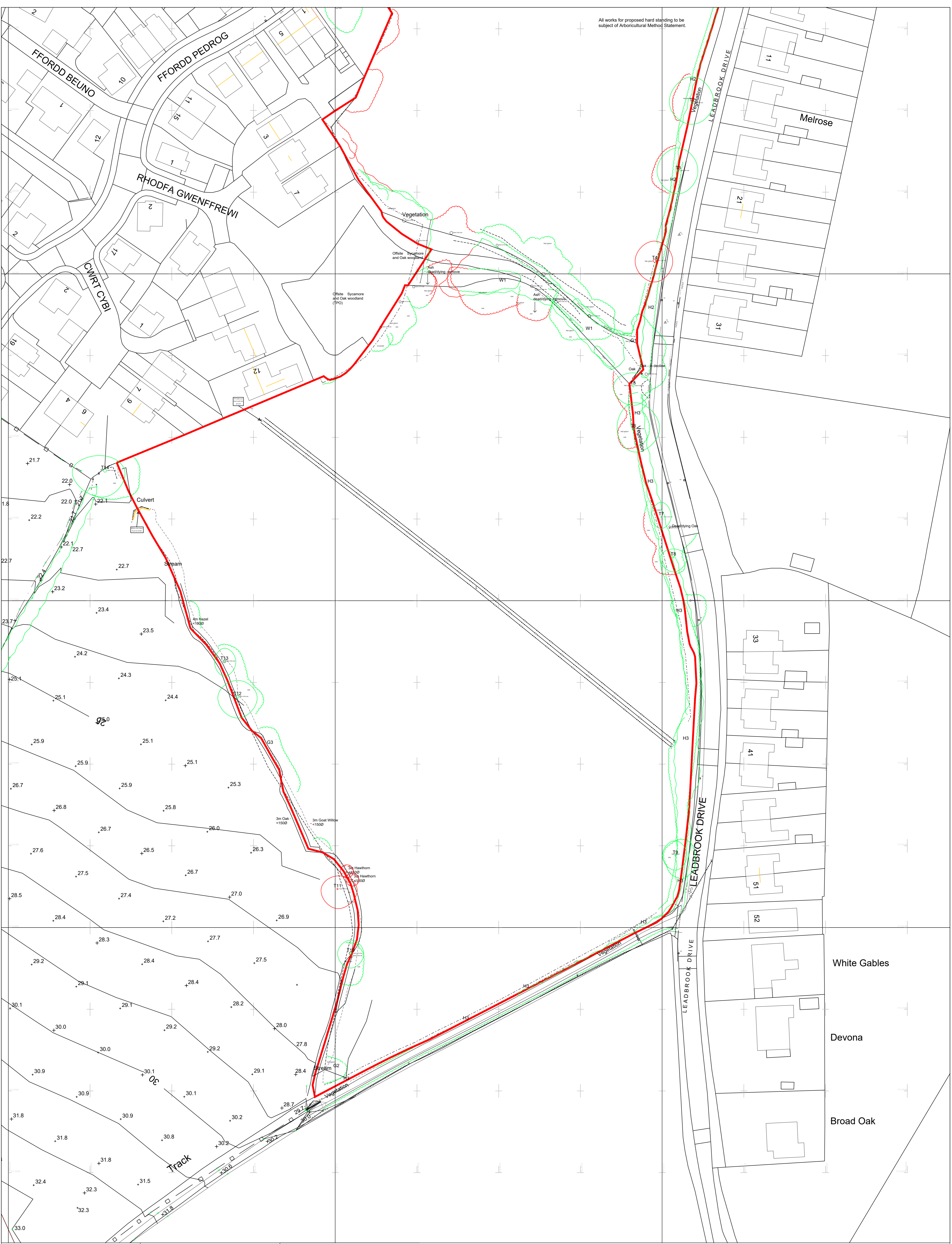
ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL, EXTRACTED FROM OS DIGITAL DATA.

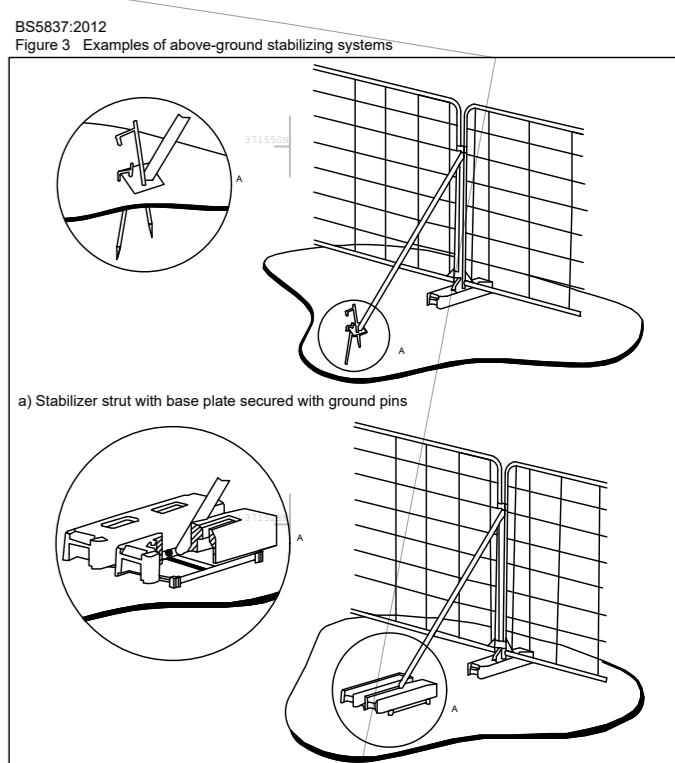
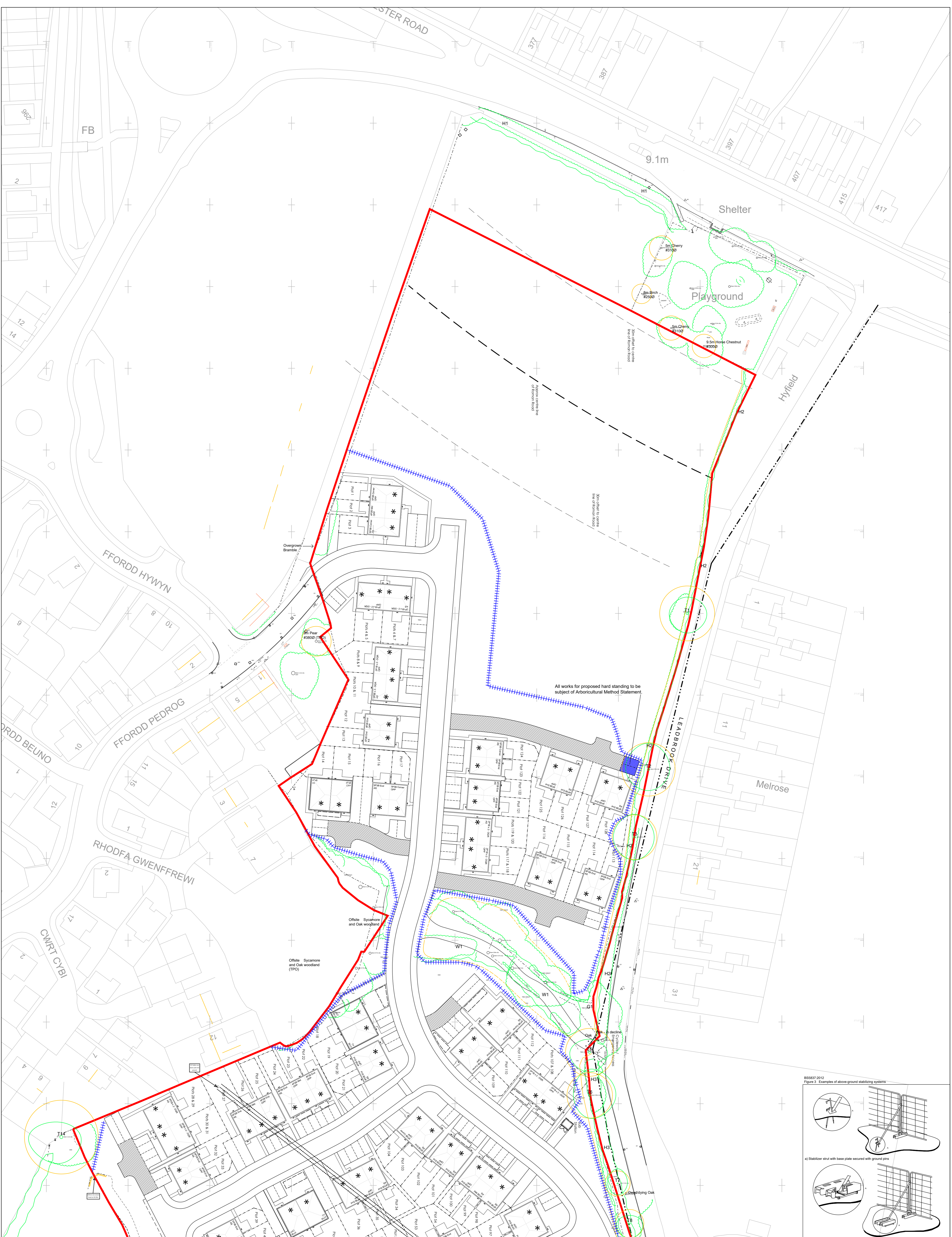
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All works for proposed hard standing to be subject of Arboricultural Method Statement.





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CLIENT:
Castle Green Homes

PROJECT:
Quarry Farm, Oakenholt, Flint CH6 5WH

DRAWING TITLE:
Tree Constraints & Draft Protection Drawing
(Sheet 1 of 2)

SCALE: 1:500 @ A1
DRAWN BY: CP
DATE: 10/07/2023
CHKD BY: HM
P.1839.23.T02

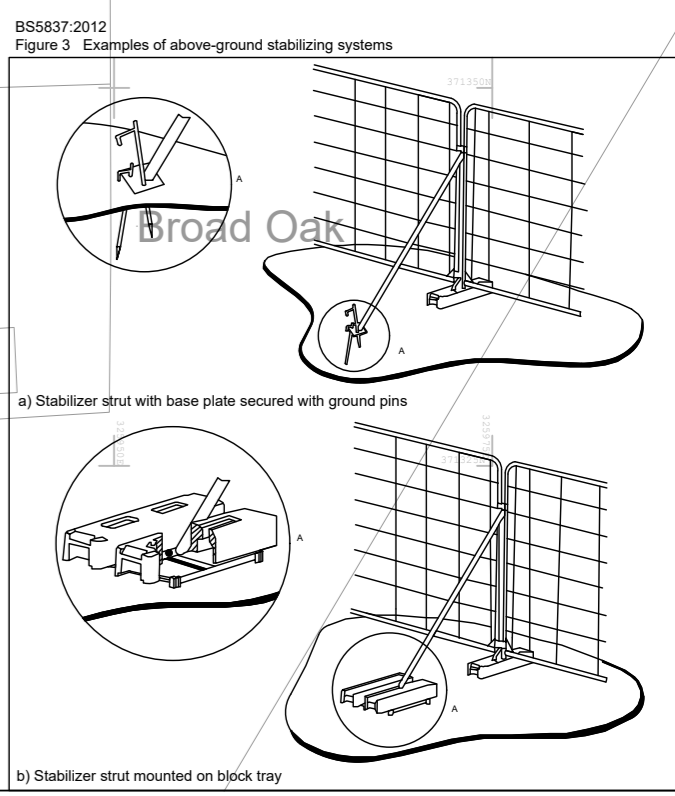
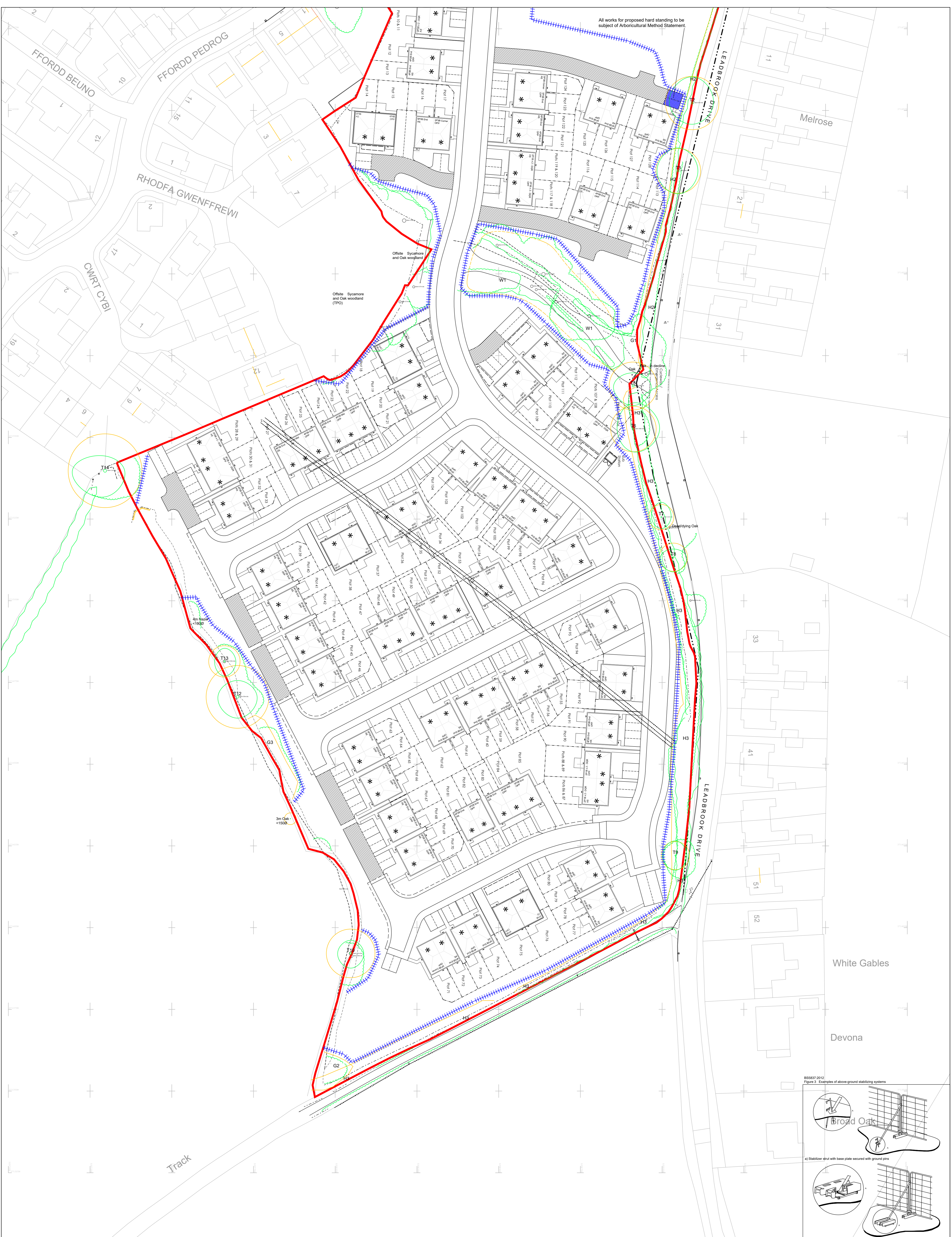
KEY	
	Existing tree to be retained
	Proposed location of protective fencing - see inset for type / construction detail
	Root protection methodology to be agreed in these areas. Geotextiles/ porous surfacing to be agreed / implemented
	Extent of Root Protection Area for retained trees in accordance with BS5837: 2012 Trees in relation to design, demolition and construction - Recommendations

BS5837:2012
Figure 3 Examples of above-ground stabilizing systems

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CLIENT:
Castle Green Homes

PROJECT:
Quarry Farm, Oakenholt, Flint CH6 5WH

DRAWING TITLE:
Tree Constraints & Draft Protection Drawing
(Sheet 2 of 2)

SCALE: 1:500 @A1
DRAWN BY: CP
DATE: 10/07/2023
CHKD BY: HM
P.1839.23.T02

KEY	
	Existing tree to be retained
	Proposed location of protective fencing - see inset for type / construction detail
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