

Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Arboricultural Impact Assessment

Land off Holt Road
Wrexham
LL13 9EH

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Ascerta

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P.1624.22

Arboricultural Impact Assessment

Land off Holt Road, Wrexham, LL13 9EH

For

Bellway Homes Limited (North West)

March 2022

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

**Appendix 2 Drawing P.1624.22.01 *Tree Survey*
 Drawing P.1624.22.02 *Tree Constraints & Draft Protection*
 *Drawing***

EXECUTIVE SUMMARY

A survey of the existing trees on and adjacent land off Holt Road, Wrexham, LL13 9EH 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 seventy-four residential dwellings 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
- 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 land off Holt Road, Wrexham, LL13 9EH 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 24th March 2022 by Kevin Pope, 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 seventy-four 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 Wrexham 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 made with the Local Planning Authority via email on 29th March 2022 indicate that four trees (T1, T2, T3 & T7) on the periphery of site are statutorily protected by Tree Preservation Order 1990. No. 54. The site does not lie within a conservation area. 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. 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, and that this will have a plasticity index in the low range. 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 24th March 2022 during sunny 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:** Seven individual, seven groups of trees and one hedge were recorded during our survey, the details of which can be found within Appendix 1 to this report and cross referenced with drawing P.1624.22.01 *Tree Survey*.
- 5.2 Direct Impact on Trees:** The development of the site as proposed will directly require the removal of G6 (two young 5m Oaks) and some low value saplings on the periphery of site.
- 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 positive.
- 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:** Providing that protective fencing is erected in advance of the commencement of demolition / site clearance works, and retained in-situ during the entire construction phase, the potential for unnecessary damage to retained trees should be limited.
- 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.
- 5.13 Proposed Buildings Located Adjacent / Within Root Protection Areas:** The drawings appended to this report indicate areas where proposed built structures encroach within or are located immediately adjacent root protection areas of retained trees. 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.
- 5.14 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:** Considering the layout of trees on site and in some cases their close proximity to areas proposed for intense development activity, it is possible that working space across the site may be somewhat restricted, therefore some key activities may have the potential to cause harm to retained trees. Provision will therefore need to be made for the physical protection of retained trees and in particular their root systems during the construction phase, as indicated on the attached drawings.
- 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.

5.0 Survey Results & Impact Assessment (Continued)

- 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	G6	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	T1, G1, G2, T2, T3, T4, G3 & T7	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	T1, T2, T3 & T4	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.
Demolition / remediation works	H1	Buildings to be demolished carefully, removing the structures away from tree stems. Such works should be subject to a tree protection method statement.
Construction of new buildings/structures	T1, G1, G2 & T7	Sections of foundations within and immediately adjacent root protection areas to be excavated carefully, with machinery located outside of RPAs and roots pruned cleanly back to the soil surface when necessary. 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.
Working Space	T1, T3, T4 & T7	Working methodology to be agreed in advance.
Access Facilitation Pruning	G1 & T4	All pruning works should be carried out to a minimum of the standards contained within BS3998: 2010 <i>Tree work – Recommendations</i> .
Protection of proposed planting areas	Area to the west of site	These areas should be fenced off at the start of the development for the protection of soil structure.
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*.

Appendix 1

Site:	Land off Holt Road, Wrexham, LL13 9EH	Surveyor:	Kevin Pope	 Landscape Trees Ecology
Client:	Bellway Homes Limited (North West)	Survey Date:	24 th March 2022	
Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Sunny	

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
T1	Oak	21	#1100	13.20	8	8	8	8	4	M	G	Located in neighbouring garden 1m from assumed site boundary fence line. Well balanced canopy. Ivy colonising lower stem. Relatively good example of species. Protected by TPO NO 54 1990.	Prune back site side by 1-2m if necessary.	40+	A1
G1	Cypress, Blueblossom	1.5-3	#200 max	2.40 max	2	2	2	2	0	Y-EM	F	Unmaintained young boundary scrub. Cypress is a good boundary feature for neighbouring garden.	Remove Blueblossom scrub and prune Cypress to create maintained uniform boundary feature.	20+	C2
G2	Sycamore, Lawson Cypress, Hazel, Silver Birch, Hawthorn	4-9	#400 max	4.80 max	5	5	5	5	0	Y-EM	P-G	All off site trees except one poorly pruned Sycamore and Hazel. Previously failed birch stem fallen into site. Cypress in relatively good condition. Good boundary feature.	Remove failed Silver Birch limb. No other works required.	30	B2
T2	Sycamore	10	230+260	4.17	4	4	2	3.5	2E	EM	F	Previously pruned to boundary in neighbouring garden. Bifurcates at 0.5m. Protected by TPO NO 54 1990.	No works required at this stage.	20+	C1
T3	Horse Chestnut	15	#1000	12.00	8	9	8	8	4	M	G	In neighbouring garden. Well balanced canopy. Signs of bark necrosis and deadwood on lowest southerly branch. Trifurcates at 3m. Relatively good example of species. Protected by TPO NO 54 1990.	No works required at this stage.	30	B2
T4	Ash	11	#320 +220 +220 +200 +150	6.14	3	6.5	6.5	6.5	3	EM	F	Southerly canopy bias over road. Supressed by neighbouring T3. Located adjacent neighbouring fence line.	Canopy lift to 4m to facilitate new access road.	30	B2

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

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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
G3	Ash, Elder	3-11	#600 max	7.20	6	6	6	6	0	EM	F	Group colonised by Ivy. Ash Previously pruned away from overhead power lines. Chain link fence running through middle of group.	No works required at this stage.	20+	C2
T5	Ash	9.5	#340	4.08	5.5	5.5	5.5	5.5	2	EM	G	Canopy well balanced and developing well. Ivy beginning to colonise. Bifurcates at 1.5m Located on assumed site boundary fence line.	No works required at this stage.	30	B1
G4	Ash, Elder	3-9	#220 +170 +380 +100 max	5.78	6	6	6	6	3	Y-EM	F	Younger Ash in centre of group with Daldinia in cavity at base of stem. Two larger ashes beginning to be colonised by Ivy. Smaller trees surrounded by dense bramble.	No works required at this stage.	20+	C2
T6	Ash	11	#750	9.00	6	7	7	7	3	M	F	Evidence of reduced vigour. regular small diameter deadwood throughout canopy. Ivy clad.	No works required at this stage.	20+	C1
G5	Ash, Oak	4.5-9	330 max	3.96	6	6	6	6	1	Y	F	Linear group of planted Ash along assumed site boundary fence line. Good boundary feature.	No works required at this stage.	20+	C2
T7	Oak	15	920	11.04	8	8	8	8	4	M	G	No significant structural defects visible. Well balanced canopy. Previously failed limb in centre of tree occluded well. Small diameter deadwood. Relatively good example of species. Protected by TPO NO 54 1990.	Prune back site side by 1-2m if necessary.	40+	A1

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

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Brief:	Tree Survey to BS5837:2012	Survey Conditions:	Sunny	

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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
G6	Oak	5-6	#300 max	3.60	3.5	3.5	3.5	3.5	1	Y	G	Canopies developing well. Located within assumed site boundary fence line.	Remove group to accommodate development proposals. Replace with suitable specimens at the landscaping stage of the project.	30+	C2
G7	Laurel, Beech, Silver Birch	2.5-12	#120 max	1.44	3	3	3	3	0	Y-EM	F-G	Beach/Laurel hedges with one young Silver Birch set back adjacent to neighbouring property.	No works required at this stage.	30	C2
H1	Elder, Cypress, Laurel, Holly, Ash	2.5-5	#200 max	2.40	1	1	1	1	0	EM	F	Mixed species boundary hedgerow. Previously maintained. Good boundary feature.	No works required at this stage.	20+	C2

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

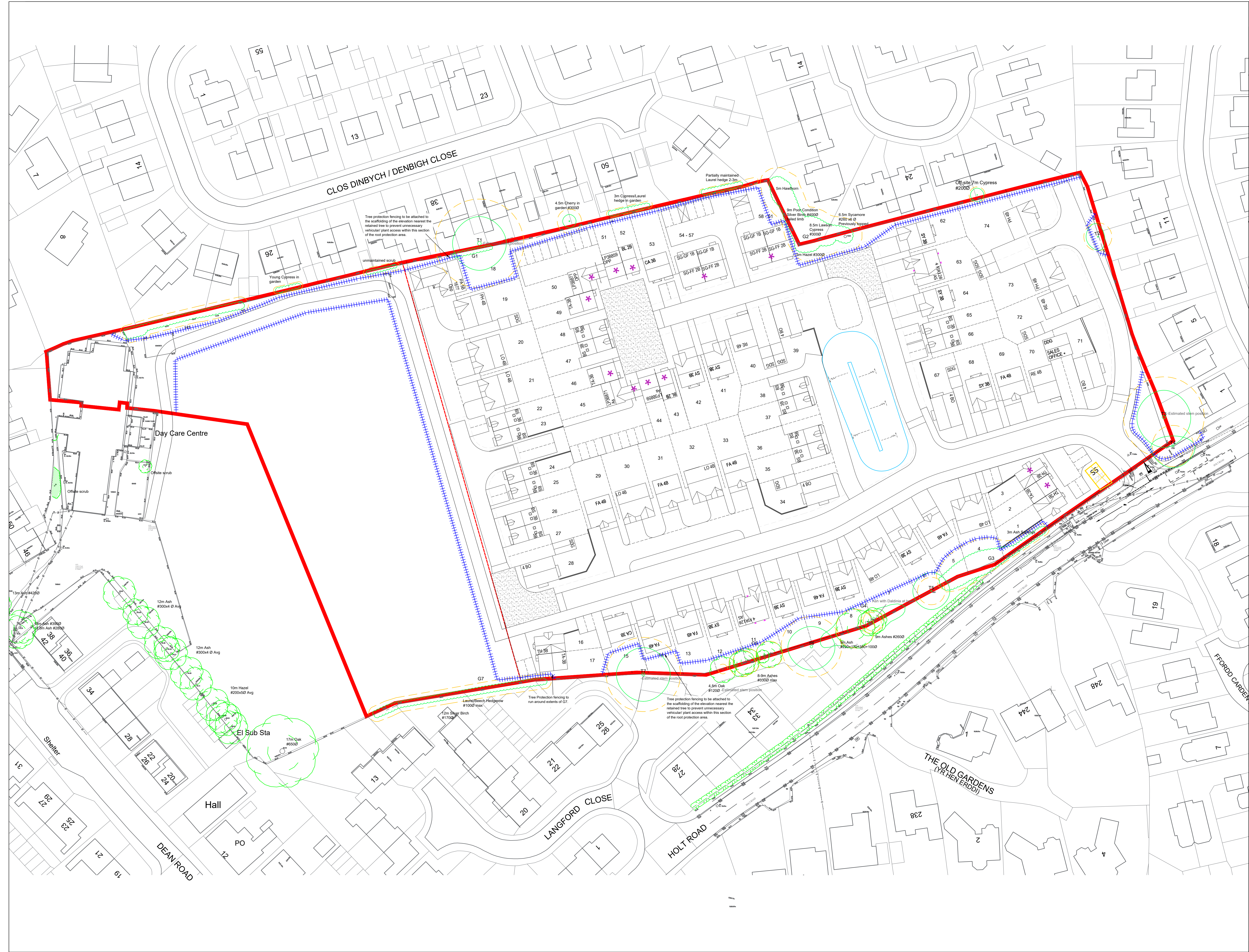
T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
Ht Crown Clearance: Canopy ground clearance
Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in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

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Appendix 2



DO NOT SCALE

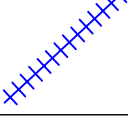
ALL COORDINATES RELATED TO LOCAL GRID
LOCATED TO 20-30 M BY BEST FIT TO DETAIL
EXTRACTED FROM OS DIGITAL DATA

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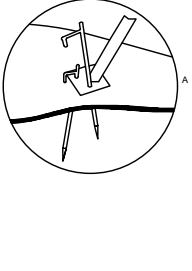
KEY

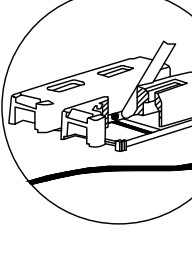
Existing tree to be retained

Extent of Root Protection Area for retained trees in accordance with BS5837: 2012 Trees in relation to design, demolition and construction - Recommendations

Proposed location of protective fencing - see inset for type / construction detail

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

a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

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Bellway Homes Limited (North West)

PROJECT:
Land off Holt Road, Wrexham, LL13 9EH

DRAWING TITLE:
Tree Constraints and Draft Protection Drawing

SCALE:
1:500 @A1

DRAWN BY:
KP

DRAWING No:
CP

REV:
-

DATE:
29/03/2022

CHKD BY:
P.1624.22.02

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