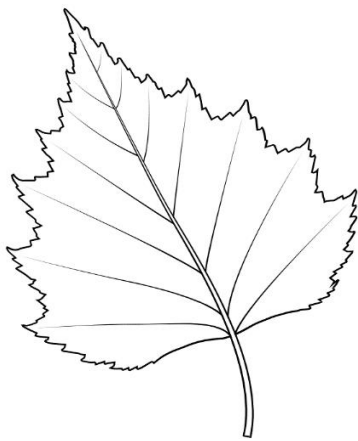


Arboricultural report – tree assessment for proposed development land off St. Marys Avenue, Overton, near Wrexham

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Birch

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Summary – key points in overview

- The trees referred to in this report are all located within existing grassland east of St. Marys Avenue, Overton, or in private land immediately adjacent to this land. The trees have been assessed in relation to potential development of the existing grassland site for residential property. The arboricultural report has been informed by drawing no. 1522 SK01 rev A – dated 13.09.22.
- Significant tree cover at the site comprises typical, well-established agricultural hedges of hawthorn and blackthorn and a relatively small number of established broadleaved hedgerow trees at the eastern and south-eastern perimeter of the grassland.
- The principal tree at the site is a large, healthy mature oak (survey tag 0080) at the north-east edge of the site. This tree dominates the landscape of the development site and is a significant existing environmental feature. A high-quality owl box is installed in this oak tree. The development as currently indicated will impact on the Root Protection Area (RPA) of this tree and it is recommended that further consideration is given to layout in this section of the proposed development.
- Retention and protection of the hedges and where appropriate hedgerow trees is recommended in the schedule of trees within the report. This will ensure the

continuing provision of valuable landscape screening, ecological connectivity and aesthetic value by retaining and protecting these tree features.

- Tree protection using barrier fencing is prescribed for the boundary hedges and trees using specifications and methods referenced in BS5837:2012

1.0 Introduction

1.1 Terms of Reference

1.1.1 Birch has been commissioned by Arbor Vitae on behalf of client Pickstock Homes to prepare an arboricultural report that considers the condition of trees at the site and assesses them in relation to potential development and future use of the area for residential property.

1.1.2 A site assessment was carried out on 18.10.2022. Qualitative and quantitative tree data was recorded in order to assess the condition of the existing trees.

1.1.3 Note that any references to tree location/position in this report are indicative and descriptive only.

1.2 Scope of Works

1.2.1 The assessment of the trees and any other factors are of a preliminary nature. The trees were inspected on the basis of the Visual Tree Assessment (VTA) method as developed by Mattheck and Breloer (1994) and Mattheck (2007). The trees were

inspected from ground level with no climbing inspections undertaken. It is not always possible to access every tree and as such some measurements may have to be estimated. No samples have been removed from the site for

analysis. The survey does not cover the arrangements that may be required in connection with the removal or installation of existing underground or overhead services or in working around such services and infrastructure.

1.2.2 An intrinsic part of tree inspection in relation to development or built environment is the

assessment of risk associated with trees in close proximity to persons and property. Most

human activities involve a degree of risk with such risks being commonly accepted, if the associated benefits are perceived to be commensurate.

In general, the risk relating to trees tends to increase with the age of the trees concerned, as do the environmental benefits. It will be deemed to be accepted by the client

that the formulation of the recommendations for all tree management will be guided by the cost-benefit analysis (in terms of amenity) of the tree work.

2.0 The Site

2.1 Overview

2.1.1. The land at Overton is immediately bounded by local tennis courts and the bowling green to the south-west, by residential property to the west (Clerc y Mendy and Plas Madoc), by a primary school Forest School/environmental education area to the north, by agricultural grassland to the east and by residential properties at Oak Drive to the south. The wider local landscape around Overton is principally agricultural grassland and arable land with scattered woodland.

2.2 Soils

2.2.1 The soil types observed on site were loams. Landis (<http://www.landis.org.uk/soilscapes/>) describes the typical soil type here as 'Soilscape 6: Freely draining slightly acid loamy soils'.

No specific soil sampling was done as part of this survey.

2.2.2 The description given was obtained from observation of likely soil types. By definition, this information is not comprehensive and therefore any decisions taken with regards the management, usage or construction on site should be based on a specific and detailed soil analysis. This report provides no information on soil shrinkability. It will be necessary for practitioners in other disciplines (e.g. engineers considering foundation design) to obtain this data as required.

2.3 Statutory Tree Protection

2.3.1 The proposed development site is outside the designated Overton Conservation Area. A specific Tree Preservation Order check was not made with Wrexham County Borough Council and it is assumed that the prospective developer will undertake this and other land and environment designation checks as part of the planning application process.

3.0 Tree Survey condition assessment and recommendations

3.1 Trees were assessed from ground level only. The assessment details for trees and recommendations are shown in the attached Appendix 1 and indicative tree locations are shown on drawing Overton1-TS

3.1.1 Trees within the development area boundary were tagged with 25 mm. diameter numbered survey discs using soft aluminium nails. Trees adjacent to the site but outside

the development boundary have been recorded and assessed where deemed to be relevant by the surveyor. Such trees are on private land so were not accessible to survey, are not tagged and any measurements attributed to them are estimated by visual observation only. These offsite but adjacent trees are located in the gardens of properties at Oak Drive close to the southern end of the site.

3.1.2 The assessment confirms the value and significance of the trees at the boundaries of the site – principally the native thorn hedges, the large mature oak 0080 at the north-east tip of the site and semi-mature sycamores 0082 and 0083 at the south-eastern edge of the site.

Sycamores 0081 and 0084 are considered to be unsuitable for retention in a development environment due to existing significant structural defects.

4.0 Arboricultural Impact Assessment

4.1 The Proposal

The proposal is to develop the existing grassland site for residential use, constructing 44 new dwellings.

As the site is relatively level, it is assumed that no soil level changes will be involved close to the existing trees and hedges or within their Root Protection Areas (RPAs). If this does not prove to be the case as the scheme is designed and planned, a more specific reappraisal of the arboricultural implications will be required.

Similarly, access to site and details for site compound, materials storage, soil stripping and stockpiling need to be considered in relation to the tree RPAs in full accordance with the requirements of BS 5837:2012

The mature oak 0080 appears to be the primary consideration in terms of potential impact on trees from development as currently outlined on drawing no. 1522 SK01 rev

A. It is located at the north-east edge of the site, immediately adjacent to the short 'neck' section of land that links to adjacent grassland to the north. This section of land was measured on site at 15 m. wide, so the RPA calculated for oak 0080 (18 m. but shown on Overton1-TP as capped as per BS5837:2012 at 15 m. maximum) exceeds the measured width of this area and extends further westwards into the adjacent Forest School/environmental education area. The presence of a high-quality owl box installed in the tree to the correct aspect and orientation suggests that the tree has some local environmental appreciation and value.

Unit 30 as shown on the developers drawing will be at the immediate edge of this trees RPA. The drawing also refers to a SUDS link running north-south through this section and a 'possible future link'. These elements will as currently outlined directly compromise the RPA of oak 0080.

It is recommended that further consideration is given to layout in this section of the proposed development to avoid or mitigate potential impacts to this significant tree.

The section of native thorn hedgerow above (north of) the adjacent tennis courts and bowling green (0092) parallel to the site access at the eastern end of St. Marys Avenue will require temporary ground protection along the edge of the access route to prevent RPA impact. Temporary ground protection can be achieved by installing Eve Heavy Duty Track Panels or similar over a 150mm layer of bark mulch spread over a geotextile membrane. They shall remain in situ until all construction work is completed.

Other relatively small areas of ground protection will be required to prevent RPA impacts at the following indicated plot locations as shown on the developers drawing:

39 and 40, 24, 25 and 28

The indicated ground protection requirement adjacent to sycamore 0081 can be disregarded if this tree is removed for condition/structural reasons as per recommendation in Appendix 1.

4.2 Requirement for Tree Barrier Fencing

Prior to the commencement of development and immediately after the completion of any tree surgery required to facilitate site access (once access and overall layout is confirmed) protective fencing will be installed on site. This must be fit for purpose, in full accordance with the requirements of BS 5837:2012 and positioned as shown on the attached drawing titled Overton 1-TP

5.0 Design Advice, Arboricultural Method Statement & Tree Protection Plan

5.1 Securing of Tree Structure and Root Protection Areas (RPA)

5.1.1 The trees to be retained will be protected by the use of robust barrier fencing installed in the positions indicated on the attached Arboricultural Impact Assessment & Tree Protection drawing titled Overton 1-TP

This tree protection will be in accordance with the requirements of BS 5837:2012. 5.1.2 – see Appendix 2 for indicative detail of typical fencing specification and example photo.

All fencing provided for the safeguarding of trees will be erected prior to any demolition or development commencing on the site, therefore ensuring the maximum protection. This fencing, which must have all weather notices attached stating “Construction Exclusion Zone – No Access” will be regarded as sacrosanct and, once erected, will not be removed or altered without the prior consent of the LPA.

5.2 Location of Site Compound

5.2.1 The position of any site compound should be determined with full recognition of the requirement to protect RPAs.

5.3 On Site Storage of Spoil and Building Materials

5.3.1 Prior to and during all construction works on site, no spoil or construction materials will be stored within the RPA of any tree on, or adjacent to the site, even if the proposed development is to be within the RPA. This is to reduce to a minimum the compaction of the roots of the trees. Any encroachment within this protected area will only be with the prior agreement of the LPA.

5.3.2 Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bund compound shall be at least equivalent to the capacity of the tank plus 10%. If there is a multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses shall be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipework shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund.

5.3.3 All material storage facilities and work areas must consider the effects of sloping ground on the movement of potentially harmful liquid spillages towards or into protected areas.

5.4 Programme of Works

5.4.1 All necessary tree works, once approved by the LPA, will be carried out prior to any other site works. Once completed, the proposed protective fencing will be erected along the lines indicated on the drawing referred to as Overton 1-TP

All of this will be carried out prior to commencement of any development works on the site.

5.5 Tree Surgery

5.5.1 Any necessary tree work will be agreed with the LPA and will be carried out in line with BS 3998:2010 (Recommendations for Tree Works). An appropriately qualified, experienced and insured arboricultural contractor will carry out the work. Any alterations to the proposed schedule of works will be agreed with the LPA prior to commencement of works.

5.6 Levels

5.6.1 Other than for any specific exception which may be referred to at item 4.0, no alterations to soil levels within the RPA of retained trees are envisaged. However, if it is necessary for these to occur, appropriate measures must be taken to prevent or minimise any detrimental effects on the affected root systems.

5.6.2 If it is necessary to excavate so close to trees that roots greater than 50mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand or using an air spade, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacing of any soil or other material in the vicinity.

5.6.3 If it is necessary to raise levels, it is essential that adequate supplies of water and oxygen pass through the soil to the trees' roots. Therefore, where necessary, a granular material will be used which will not inhibit gaseous diffusion. Possible options are no-

finer gravel, cobbles or, Type 2 road-stone. All hard surfaces will be of suitable specification to allow such gaseous diffusion, e.g. brick pavers.

5.7 Services

5.7.1 At the time of writing this report, the details shown on drawing no. 1522 SK01 rev A – dated 13.09.22 inform and illustrate the potential layout of proposed services.

5.7.2 It is proposed that all underground service runs will be placed outside the RPA of the trees on or adjacent to the site. Where it is not possible to do this, the proposed length infringing the RPA will be hand dug 'broken trenches' (NJUG 4 paragraph 4) to ensure the maximum protection of the trees' roots. The trenches may also be excavated using an air spade, or trenchless technology can be employed if this methodology is considered appropriate by the relevant service company (thus allowing services to pass below and through the roots without the need for traditional excavation). If it is necessary to cut any small roots as part of any of these processes, they should be severed in such a way as to ensure that the final wound is as small as possible and free from ragged, torn ends.

5.7.3 All service providers (Statutory Authorities) will be consulted prior to commencement of works with the aim of minimising the number of service runs on the site.

5.7.4 All service runs/trenches where they encroach within the RPA of retained trees will be agreed with the LPA prior to commencement of works.

5.8 Reporting and Monitoring Procedures

5.8.1 In accordance with item 6.3 of BS 5837:2012, the site and associated development should be monitored regularly by a competent Arboriculturalist to ensure that the arboricultural aspects of the planning permission (e.g. the installation and maintenance of protective measures and the supervision of specialist working techniques) are

implemented. Furthermore, regular contact between the Site Manager and the Arboriculturalist allows them to effectively deal with and advise on any tree related problems that may occur during the development process. This system should be auditable.

6.0 Recommendations

6.1 It is recommended that the measures detailed in this report are implemented in full to provide retained trees with the highest level of protection during the process of site development and construction.

6.2 Tree work, where required and recommended, should be completed as detailed in the Schedule of Trees. Where this has been identified for reasons other than to permit development, this work should be completed within the advised timescales irrespective of any development proposals.

6.3 The recommendations proposed as part of this survey are recommended to mitigate any identified problems that may be caused by trees in close proximity to the proposed development. To this end, should these recommendations be overruled, this survey stands as the opinion of Birch, and therefore any damage or injury caused by trees recommended by this practice for felling or tree surgery works, to which the proposed schedule of works has been altered or the tree has been requested to be retained by the LPA, cannot be the responsibility of this practice.

7.0 Limitations & Qualifications

Tree inspection reports are subject to the following limitations and qualifications.

General exclusions

Unless specifically mentioned, the report will only be concerned with above ground inspections. No below ground inspections will be carried out without the prior confirmation from the client that such works should be undertaken.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available prior to and during the inspection process. No checking of independent third-party data will be undertaken. Birch will not be responsible for the recommendations within this report where essential data are not made available or are inaccurate.

This report will remain valid for one year from the date of inspection subject to the recommendations specified within being adhered to. It must also be appreciated that recommendations proposed within this report may be superseded by extreme weather, or any other unreasonably foreseeable events. However, if any additional alterations to the property or soil levels are carried out and/or further tree works undertaken other than specified within the report, it will become invalid and a new tree inspection strongly recommended.

It will be appreciated, and deemed to be accepted by the client and their insurers, that the formulation of the recommendations for the management of trees will be guided by the following: - 1. The need to avoid reasonably foreseeable damage. 2. The arboricultural considerations - tree safety, good arboricultural practice (tree work) and aesthetics.

The client and their insurers are deemed to have accepted the limitation placed on the recommendations by the sources quoted in the attached report. Where sources are limited by time constraints or the client, this may lead to an incomplete quantification of the risk.

Assessment and report undertaken by

Jim Waterson MICFor., MRICS



Report dated 2nd November 2022

Sources:

BSI (2012) BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*

BSI (2010) BS3998:2010 *Treework - Recommendations*

Lonsdale (1999) *Principles of Tree Hazard Assessment and Management*

Mattheck and Breloer (1994) *The Body Language of Trees*

Mattheck (2007) *Updated Field Guide for Visual Tree Assessment*

Strouts and Winter (1994) *Diagnosis of ill-health in trees*

Appendix 2 Typical barrier specification outlined in section 6.2.2 Figure 2 of BS 5837:2012, illustrated in copy diagram image below and by an example shown in the copy photograph (photo credit PJC Consultancy)

