

Arboricultural Impact Assessment (AIA)

April 2023

Hogshaw Farm

Fairfield

Buxton

SK17 7HN

U R B A N
G R E E N

QUALITY MANAGEMENT

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Prepared By:	Adam Hodgins			
Checked By:	Robert Hickey			
Approved By:	Gemma King			
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1. Executive Summary

- 1.1.1. Urban Green has been instructed by Barrett Homes Manchester to carry out an Arboricultural Survey to British Standard 5837: 2012 guidelines at land at Hogshaw Farm, Fairfield, Buxton, SK17 7HN and produce our findings in a report.
- 1.1.2. It is proposed to develop the site into a residential housing estate, featuring 114 new homes with associated hard and soft landscaping. Full details of the proposed site layout can be seen on the plans included in Appendix 4.
- 1.1.3. The proposed development necessitates the removal of two individual trees, two tree groups and four trees from two further tree groups. All tree removals are within the site boundary except two trees which are on or just outside the site boundary. One tree group to be removed is low value natural colonisation internal to the site. There are several moderate quality trees, one moderate quality tree group, and one high quality tree which will be removed to accommodate the development which will have only minor impacts on the wider amenity, their loss should be alleviated by replacement tree planting and the production of a robust soft landscaping scheme. Urban Green have produced a soft landscaping scheme proposal (ref: UG_1795_LAN_GA_DRW_01 Po6) which will help mitigate the proposed tree removals to facilitate the development.
- 1.1.4. One tree and one tree group will require removal irrespective of the proposed development in accordance with good Arboricultural practice.
- 1.1.5. Some construction works are proposed within predicted root protection areas (RPAs) of five individual trees and five tree groups to be retained; however, due to the minor extent of these works within predicted RPAs it is considered the impacts will be negligible.
- 1.1.6. Urban Green have carried out a Preliminary Ecological Assessment (PEA) at the site (ref: UG_1795_ECO_PEA_04) to identify habitats on site and determine the suitability for any 'protected and/or notable' species that may occur on site. Any recommendations within the PEA report should be observed prior to any tree works being carried out.
- 1.1.7. Tree protection fencing and ground protection will need to be installed at the alignment shown on the Tree Protection Plan in Appendix 4 before any construction activity takes place.
- 1.1.8. Urban Green have produced an Arboricultural Method Statement (AMS) detailing solutions and working methods to prevent detrimental impacts on retained trees due to the proposed development (ref: UG_1795_ARB_AMS_01_REV_03_FINAL).
- 1.1.9. Information regarding the layout of new utilities and drainage and final site levels should be submitted to the Arboricultural Consultant so that the impact of these on the retained trees can be assessed.

2. Introduction

2.1. Instructions and references

- 2.1.1. Urban Green have been instructed by Barratt Homes, Manchester to carry out an Arboricultural Impact Assessment (AIA) in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction – Recommendations at the site location and produce our findings in a report to be submitted with a detailed planning application.
- 2.1.2. All trees, regardless of their statutory status, are a material consideration in a planning application. BS 5837: 2012 recognises the potential conflict between trees and development. The standard sets out to assist those concerned with trees in relation to construction and aid with decision making. This is achieved by providing impartial and balanced information on trees and their potential impacts.
- 2.1.3. Due to the size and nature of the site, it was decided that the survey methodology would include broadly grouping trees that share very similar characteristics. This method is in line with point 4.4.2.3 of BS 5837: 2012 that states *'Trees forming groups...should be identified and considered as groups where the arboriculturist determines that this is appropriate... It may be appropriate to assess the quality and value of trees as a whole, rather than individuals.'*
- 2.1.4. The site is located in the area shown in Figure 1. The OS Grid Reference is SK 06633 74413.



Figure 1 – Site Redline boundary.

2.2. Scope

- 2.2.1. The AIA takes into account any potential impacts on existing trees including the effect of any tree loss required to implement the design and recommendation for the establishment of new trees.
- 2.2.2. The AIA will also assess any potentially damaging activities proposed in the vicinity of retained trees and the effect that the retained trees may have on the development such as potential nuisance caused by excessive leaf/fruit litter, lighting levels and potential damage to structures.

2.3. Documents provided

- 2.3.1. A scaled plan has been provided with tree positions already plotted. Any extra trees found on site that were not included on the original plan have been plotted according to measurements taken on site and/or using aerial photography.
- 2.3.2. Tree locations which have been estimated are illustrated on the Tree Protection Plan in Appendix 4. The exact locations of these trees must be verified, and any discrepancies discussed with the Arboricultural Consultant before starting works on site.
- 2.3.3. A plan outlining the development proposals has been overlaid onto the Tree Constraints Plan in order to assess the potential impacts.

2.4. Limitations

- 2.4.1. The report is based upon a visual inspection. The consultant shall not be responsible for events that happen after the date of the report due to factors that were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.
- 2.4.2. The consultant accepts no liability in respect of the trees unless the recommendations of this report are carried out under their supervision.
- 2.4.3. Assessing the potential influence of trees upon load bearing soils, beneath existing and proposed structures resulting from water abstraction by trees or rehydration of shrinkable soils was not included in the contract brief and is therefore not considered in the report. The consultant cannot be held responsible for damage arising from such action.
- 2.4.4. Trees are living organisms whose health, condition and structure can change over time. The contents of this report are valid for a period of one year from the date of the report.
- 2.4.5. Potentially hazardous trees are highlighted, and appropriate recommendations are made. However, this report is not a substitute for a full tree risk assessment or management plan which are specifically designed to reduce risk and liability associated with responsibility for trees.

2.5. The Site

- 2.6.** The site is located at Hogshaw Farm, Fairfield, Buxton, SK17 7HN and comprises agricultural land, featuring several small existing buildings to the eastern perimeter, and a large, wooded area containing a portion of Nun Brook to the west. The site is bounded by agricultural land to the north, east, and west, with residential properties and St. Peter's Church and cemetery to the south.

2.7. Geology

- 2.7.1. Reference to the Cranfield Soil and Agrifood Soilscales Viewer (www.landis.org.uk) suggests there are two distinct soil types present at the site. The first soil type, which dominates the eastern portion of the site, is a freely draining, slightly acidic, highly fertile, loamy soil typical of arable and grassland locations. The second type, which is concentrated to the western portion of the site, is a slowly permeable, highly acidic, peaty soil, low in fertility, typical of moorland and forest environments.

3. Legislation

3.1. Tree protection status

- 3.1.1. A Tree Preservation Order (TPO) is an order made by a Local Authority to protect specific trees, groups of trees or woodlands in the interests of amenity. A TPO prohibits the cutting down, topping, lopping, uprooting and wilful damage or destruction of trees without the Local Authority's written consent.
- 3.1.2. Access to High Peak Borough Council's online interactive mapping facility on 07/11/2022 confirmed that there are no Tree Preservation Orders currently in effect at the site or in the vicinity.
- 3.1.3. High Peak Borough Council's interactive mapping facility also confirmed the proposed access road off the A6 (Fairfield Road) passes through Fairfield Conservation Area.
- 3.1.4. It is recommended that the Local Authority is consulted before any tree works are undertaken, as new TPOs may have been created since the time of enquiry, and heavy fines exist for unauthorised works to protected trees.
- 3.1.5. All works to trees covered by a TPO require permission from the Local Authority, including any pruning. However, this does not include trees that are dead or have become dangerous. The removal of dead branches is also excluded from a TPO. Although the above exceptions exist, it is advisable to give the Local Authority five days' notice in writing of any intended removal. Permission is not needed where tree work is required to implement an approved planning application.
- 3.1.6. In a Conservation Area, all trees greater than 75mm in diameter at 1.5m above ground level are protected. Where tree work is required in a Conservation Area, a Section 211 notice of intent must be submitted the Local Planning Authority who have six weeks to decide to either make a TPO or allow the work to proceed.
- 3.1.7. The proposed work can proceed after six weeks as it is presumed that the Local Authority consents if they have not responded in that time.

- 3.1.8. It is an offence to remove more than 5m³ of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission. It must be noted, however, that this excludes sites where planning permission has already been granted.

3.2. Wildlife

- 3.2.1. Urban Green have completed a Preliminary Ecological Appraisal (PEA) of the site (Ref: UG_1795_ECO_PEA_04), which should be read and adhered to should any tree work be required. The objectives of the assessment are to identify habitats on site and determine the suitability for any 'protected and/or notable' species, with consideration of any potential impacts on nearby designated sites. This report should be read in conjunction with the PEA report should any tree work be required.

4. Arboricultural Impact Assessment (AIA)

4.1. Summary of the development

- 4.1.1. It is proposed to develop the land at Hogshaw Farm into a residential housing estate featuring 114 new homes with associated hard and soft landscaping. Full details of the proposed site layout can be seen on the plans included in Appendix 4.

4.2. Tree constraints

- 4.2.1. BS 5837: 2012 recognises that conflicting requirements of the planning system for development means that trees are only one factor which need to be taken into consideration. Although there may be certain specimens that can pose significant constraints to development due to their importance, it is essential that inappropriate tree retention is avoided.
- 4.2.2. Trees can be adversely affected on development sites if their protection is not factored into the wider project management of onsite operations. We have transposed the tree survey plan over plans detailing current proposals in order to assess the impact on surveyed trees.
- 4.2.3. It is essential that roots are protected from construction works including physical damage from excavation and changes in soil structure from compaction and changes in ground levels.

4.3. Root Protection Areas (RPAs) explained

- 4.3.1. The RPA is an area of ground around the base of a retained tree, which is calculated in relation to the stem diameter, where disturbance should be kept to a minimum and avoided if at all possible.
- 4.3.2. The majority of tree roots grow within the upper 600mm of the soil profile where most nutrients are available as the result of the decomposition of organic matter close to the surface. Rooting conditions become less favourable at depth as the soil density increases, creating anaerobic conditions.

4.4. Surveyed Trees

- 4.4.1. Twenty-one individual trees, twenty-two tree groups, one woodland and one hedgerow have been assessed.
- 4.4.2. Trees T1, G2, half of G3, G4, T5, G8-T16, W25, G28, G37, G38 and T40-T45 are off-site. All remaining surveyed trees are within the site or on the boundaries.
- 4.4.3. The tree cover comprises mainly of moderate quality native planting, with some natural colonisation and trees of higher quality infrequently encountered across the site. Establishing woodland adjacent to the western boundary provides a significant contribution to the character and appearance of the area.
- 4.4.4. Trees G8-G12, T17-G21, most of W25, G28, G29, T31-T34, G37 and G39 are visually important in terms of their contribution to the character and appearance of the area. The remaining trees and vegetation internal to the site are of secondary importance in visual terms.
- 4.4.5. Five individual trees and four tree groups were assessed as BS 5837: 2012 'High Quality' Retention Category 'A'; eight individual trees, thirteen tree groups, one hedgerow and one woodland were assessed as BS 5837: 2012 'Moderate Quality' Retention Category 'B'; seven individual trees and four tree groups were assessed as BS 5837: 2012 'Low Quality' Retention Category 'C'; and one tree and one tree group were assessed as BS 5837: 2012 'Unsuitable' Retention Category 'U'. Details of individual tree categorisation can be found in the Tree Data Schedule at Appendix 1.

4.5. Impacts of development

- 4.5.1. The proposed development necessitates the removal of two individual trees (T24 & T34), two tree groups (G6 & G27) and four trees from two further tree groups (G3 & G21). The removal of these trees will have a low, localised impact on the visual amenity of the site and will not materially harm public views from outside the site. The loss of these trees should be alleviated by replacement tree planting and the production of a robust soft landscaping scheme. Urban Green have produced a soft landscaping scheme proposal (ref: UG_1795_LAN_GA_DRW_01 Po6) to be implemented alongside the proposed development.
- 4.5.2. Tree group G3 is offsite, therefore permission will need to be sought from the landowner to remove the trees prior to the commencement of works.
- 4.5.3. One tree, T7, and one tree group, G26, were assessed as 'Unsuitable' BS 5837: 2012 Retention Category 'U' and will require removal irrespective of the proposed development, in line with good Arboricultural practice.
- 4.5.4. The remaining trees surveyed are to be retained and protected in accordance with standards and guidelines detailed in BS 5837: 2012.
- 4.5.5. New permanent hard surfacing is required within the predicted RPAs of trees and groups T17, G21 and T22. An engineered no dig hard surface such as Cellular Confinement should be utilised to avoid damage to tree roots and soil compaction. The approximate coverage is within recommended guidelines as detailed in BS 5837: 2012 section 7.4 and should not have any long-term impacts to the health of the trees if installed following recommended guidelines.

- 4.5.6. Supervised excavation with possible root pruning will be required within a small section of the predicted RPA of retained trees within tree groups G3, G21 and T22 to allow for the construction of the new access road. Supervised excavation and possible root pruning within the predicted RPA of G42 will also be required for the installation of the temporary sales cabin, with a larger incursion into the RPA, (approximately 20%). The proposed works are within the recommended threshold of RPA incursion and should not negatively affect the retained trees. These works should be carried out using hand dig tools only within these areas, with any necessary root pruning to be undertaken by the project Arboriculturist in accordance with section 7.2 of BS 5837: 2012.
- 4.5.7. Boundary treatments will be required to facilitate construction of retaining boundary fencing within the predicted RPAs of trees and tree groups T19, G21 and G30-T33, as indicated on the Tree Protection Plan at Appendix 4. Guidance at section 4.8 of this report should be adhered to during installation of the boundary fencing.
- 4.5.8. Trees and tree groups G4, T19, G21, G42 and T45 will require pruning to provide suitable access and clearance for the proposed development, as indicated on the Tree Removal Plan and as detailed on the Tree Works Schedule at Appendix 4.
- 4.5.9. A group of Himalayan Balsam adjacent to G6 and several groups of Japanese Knotweed within and at the periphery of W25 and adjacent to G37 were identified and will require removal by appropriately qualified personnel. These species are listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) as invasive non-native species, and it is an offence to permit the establishment and spread of such species into the environment.

4.6. Tree surgery works

- 4.6.1. Tree works that are recommended within the Tree Works Schedule (Appendix 4) are works required to facilitate development and also include details or remedial works. Tree works stated in the Tree Data Schedule (Appendix 1) are of a general maintenance nature and can be carried out at any time as per recommendations.
- 4.6.2. Tree works required to facilitate the development will be carried out prior to the commencement of any onsite operations. This should allow sufficient space for approved construction to be carried out.
- 4.6.3. Any unforeseen tree works that become apparent during the construction process will require written consent from the Local Authority Tree Officer.

4.7. Protective fencing

- 4.7.1. Temporary protective fencing will need to be installed at the alignment indicated on the Tree Protection Plan in Appendix 4, prior to the commencement of any construction activities on site including the delivery of materials and site facilities.
- 4.7.2. Any fencing that is damaged so that it is no longer able to protect retained trees must be replaced/repared immediately with appropriate fencing.
- 4.7.3. The required specification for protective fencing is illustrated in the Tree Protection Plan (Insert 1).

- 4.7.4. The 'in-ground' system involves driving vertical scaffold poles approximately 0.6m into the ground onto which are affixed horizontal scaffold poles and bracing struts. 2m high anti-climb weldmesh panels are then wired to the scaffold framework. The vertical scaffold poles should be at a maximum of 3m apart.
- 4.7.5. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to the tree roots when locating uprights.
- 4.7.6. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" shall be fixed to every 10m of protective fencing, as illustrated on the Tree Protection Plan (Insert 2).

4.8. Boundary treatments

- 4.8.1. Where fencing is to be installed within RPAs of retained trees, post holes will be excavated by hand and kept as narrow as possible. Trial holes will be dug using a manually operated soil augur in order to position post holes to avoid major roots.
- 4.8.2. Exploratory post holes will be dug before committing to positions. If any roots in excess of 25mm are encountered, they are to remain intact, and the post hole will be relocated to avoid them. The fencing system must permit such flexibility (i.e. where fixed panel widths are used, all post holes must be excavated before committing to the final location)
- 4.8.3. All post holes will be excavated by hand and kept as narrow as possible (maximum diameter 300mm).

4.9. Temporary site cabins

- 4.9.1. All storage facilities and deliveries will make use of existing hard surfaces to avoid unnecessary compaction within RPAs. The locations will be agreed in writing with the LPA prior to delivery and will remain in the agreed locations unless approved by the LPA.
- 4.9.2. If storage facilities require siting within RPAs, every effort will be made to ensure that any damage to aerial parts of retained trees is avoided and that appropriate footings are used to avoid root damage or compaction of the soil.

4.10. Utilities

- 4.10.1. At the time of writing Urban Green have not been made aware of any new utilities or service runs that will be associated with the development. Information regarding the layout of new utilities and drainage and final site levels should be submitted to the Arboricultural Consultant so that the impact of these on the retained trees can be assessed.

4.11. Recommendations

- 4.11.1. An Arboricultural Method Statement (AMS) has been produced by Urban Green to provide solutions and working methods so that the impacts identified do not have a detrimental effect on retained trees (ref: UG_1795_ARB_AMS_o1_REV_o3_FINAL). This AMS should be readily available to all onsite personnel and strictly adhered to throughout the construction process.
- 4.11.2. All operations that could affect trees on and adjacent to the site must be considered as part of the project management of the Proposed Development. It is therefore recommended that an Arboricultural Consultant is appointed as part of the design and management team to advise on pre-development issues and supervise on-site operations.
- 4.11.3. The Arboricultural Consultant may also have an advisory role in the preparation of site including tree surgery works and the protection of trees during demolition processes.
- 4.11.4. The Arboricultural Consultant shall be responsible for inspecting all protective fencing prior to the commencement of all onsite activity.

Appendix 1 - Tree Data Schedule

The following pages contain information gathered during the site survey. The reader should refer to Appendices 2 and 3 in order to correctly interpret the tree data.

Appendix 2 - Tree Schedule Definition of Terms

Tree Referencing	Individual Trees T (+number) Grouped Trees G (+number) Hedgerows H (+number) Woodlands W(+number)
Age Category	Young Usually <15 years Semi-mature Significant growth expected, approximately one third of life expectancy complete Early-Mature Full height achieved with further significant growth possible, up to two thirds of life expectancy complete Mature Full height has been achieved with possible spreading of the canopy, usually past two thirds of overall life expectancy Veteran Usually a tree of significant age with characteristics that give additional cultural, landscape and conservation benefits, Over-mature A tree declining due to age as indicated by deterioration in the health and condition of its crown and trunk.
Species	Botanical Name conforming to the International Code of Nomenclature for algae, fungi, and plants (ICN). For universal plant recognition. Common Name commonly used names usually on a local and national scale.
Tree Height	The vertical distance between the base of the tree (where soil and buttress meet) and the tip of the highest branch on the tree.
Crown Height	Measured from ground level to the height at which the main crown begins.
Stem Diameter (DBH)	Stem diameter is measured at 1.5 m above ground level
Crown	Measurements taken from all four cardinal points in metres.
Notes	Notes are made to inform of any possible defects, peculiarities or points of interest that may relate to the trees position, physiology, safety and possible effects on developments.
Recommendations	Recommendations are made in accordance to good arboricultural practice. Recommendations are made regardless to the end usage of the site.
Visual Amenity	General significance in the landscape (1 - Low, 2 - Moderate, 3 - High, 4 - Very high)
Priority Scale	Priority is given dependant on the perceived threat and the likelihood of failure given to a possible hazard. The priority of work is given regardless of the end usage of the site. Urgent To be carried out as soon as possible. Very High To be carried out within 1 month. High To be carried out within 3 months. Moderate To be carried out within 1 year. Low To be carried out within 3 years.
Physiological Condition:	Good Usually healthy with no symptoms of poor health or disease. Fair Exhibiting signs of poor health or minor disease infections that are not considered to be hazardous. Poor Disease present in considerable quantities or with very poor physiological vigour. Very Poor Tree is in a moribund state in extremely poor condition, usually with little chance of recovery.
Structural Condition:	Good A tree with no significant structural defects. Fair Minor defects may have been observed but are not considered to be immediately hazardous. Poor Significant defects found. Tree requires monitoring or remedial works. Very Poor Major defects that require immediate remedial work or the removal of the tree.
Life Expectancy:	The estimated number of years before the tree may require removal should no unexpected mechanical or environmental impacts occur to the tree.
Retention Category:	Please refer to Tree retention categorisation table on the next page.

Appendix 3 - Tree Retention Category

The following table provides an explanation of retention categories used.

Trees to be removed		Colour on Plan
Category U Includes trees of very low quality that offer little or no amenity value.	Trees that are in such a condition that they should be removed as a matter of good arboricultural practice regardless of given proposals.	RED
Trees to be considered for retention		
Category A Trees of a high quality, with an estimated life of expectancy of at least 40 years	Trees that are excellent examples of their species, usually mature, especially if rare or unusual including veteran trees. Category A trees are likely to enhance a development and should be retained wherever possible.	GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that are good examples of their species. B category trees are usually mature or younger trees with the potential to reach A category in the future. Although the retention of these trees is desirable, some losses may be acceptable.	BLUE
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	GREY

NOTE: Trees that are viewed as borderline and do not fit neatly into either of the categories are given a plus or minus rating (+/-) in the tree data schedule. Therefore, C+ would denote a tree being borderline C/B although C is deemed to be the most appropriate category. Similarly, B- would denote a tree being borderline B/C with B seen as the most appropriate category.

Appendix 4 - Site Plans

The site plans referred to in the report follow this page which include the following:

- Tree Constraints Plan
- Tree Removal Plan
- Tree Works Schedule
- Tree Protection Plan
- Tree Protection Inserts

Although included plans are usually to scale, they are only intended to indicate positions of surveyed trees and dimensions should not be taken from these drawings.