



Arboricultural Impact Assessment

In accordance with BS5837:2012 Trees in relation to design,
demolition & construction – Recommendations

Date of Assessment

14th September 2025

Site

Moseley Road, Fallowfield,
Manchester, M14 6PD

Author

Carl Riva,
Dip Arb ABC L6

Client

NHS Property Services

TABLE OF CONTENTS

1. Executive
2. Introduction
3. The Development Proposal
4. Tree Survey and Constraints
5. Other Constraints
6. National and Local Planning Policies
7. Arboricultural Impact Assessment
8. Conclusion
9. References
10. Glossary of Terms

Appendices

- Tree Quality & Survey Methodology
- Tree Schedule
- Tree Constraint Plan
- Tree Protection Plan
- Arboricultural Method Statement

EXECUTIVE SUMMARY

I have been instructed to provide an assessment of the impact from a development proposal for new medial centre development, new surfacing and new access on the existing tree stock at Moseley Road, Fallowfield, Manchester, M14 6PD.

A tree survey has been completed in accordance with the recommendations of BS5837 (2012) Trees in relation to design, demolition and construction, and a report prepared to assess the impact of the proposal on the existing tree stock.

- 3 trees were recorded as being of moderate quality with a remaining useful contribution of at least 20 years (Category B)
- 12 trees have been assessed as being of low quality and condition (Category C) with at least 10 years remaining contribution to the site.
- 6 trees have been assessed as being of poor quality and condition (Category U) with less than 10 years remaining contribution to the site.

The development proposal will result in the loss of 6 dead trees Category U quality of and 8 trees of Category C quality from within the footprint of the site. The removals are required for removal as they are within the footprint of the proposed new medical centre structure and new hard landscaping.

The retained trees will be protected from harm during the development. The protection measures include the use of trunk protection, tree protection fencing to be used as a barrier to exclude any activity within the protected zone or through the use of materials that will shield the ground from harmful processes such as compaction or contamination, the use of temporary compaction boards and Arboricultural supervision of demolition of structures, site investigations and by adopting a no-dig approach to construction within the root protection areas, temporary compaction boards.

The foundation for structure will be constructed with conventional strip methods, excavations shall be lined and sealed to prevent any leaching of the concrete into the soil and causing desiccation of retained roots by concrete run off, this will reduce the impact on adjacent root protections areas and the surrounding soil.

The impact of the proposed scheme has also been assessed against current national and local planning policy in relation to trees. National planning policy seeks to ensure that trees that positively contribute to a site and which are considered to be irreplaceable habitat are protected, principally in reference to veteran and ancient trees. No such trees are being removed and therefore the scheme is considered to be compliant with the arboricultural requirements of the national planning policy framework.

Local Planning Policy recognises the importance of trees across a broad spectrum of benefits and therefore seeks to ensure that they are retained and protected in development schemes.

The proposed landscape scheme seeks to restore and improve the setting of the site and replacement tree is a key element of this.

Local Planning Policy seeks to ensure development makes a positive contribution to the character and setting and where possible, enhancement. This scheme offers the opportunity provide that enhancement while keeping those trees that offer the most value. And as such is

considered to be compliant with the requirements of local and national planning policy in so far as it relates to trees.

All works will be completed by qualified arborists working in accordance with BS3998 (2010) Tree.

INTRODUCTION

Introduction

Written instruction was received from (NHS Property Services), 13th September 2025, to undertake a tree survey to assist in the design and impact of proposed development on the site.

Scope

The scope of the instruction was to:

- Complete a scoping survey of all trees within the historic rides at the property, including any trees in close proximity. The tree survey is to be carried out in accordance with the recommendations laid down by BS5837:2012 Trees in relation to design, demolition and construction – Recommendations ('BS5837').
- Prepare a schedule of all recorded trees and a plan of tree constraints to assist the design team understand constraints arising from trees to any development scheme.
- Provide advice to the design team on tree related issues including avoidance, mitigation and compensation measures.
- Prepare an Arboricultural Impact Assessment for submission with a planning application. This report is to include a review of statutory constraints and a review of planning policy in relation to trees.

Purpose of this report

This report is an Arboricultural Impact Assessment and is intended to provide an assessment impact that a proposed development scheme will have on the existing tree stock at the site.

This document has been prepared for submission as part of a planning application to assist in the determination of the application.

The report is intended to be read by those who do not necessarily have specialist knowledge of trees and is therefore written in non-technical language. Where the use of technical terms is unavoidable, these will be highlighted in bold when first used and a definition provided in a glossary of terms at the end of this report.

Site Description

The site is located at latitude and longitude 53.441766, -2.206343, in Fallowfield, M14 6PD. The site and surrounding area consist of school playing fields and pitches residential properties and road network. The site has young mature to mature trees to the North, East, West and South to the of the application site.

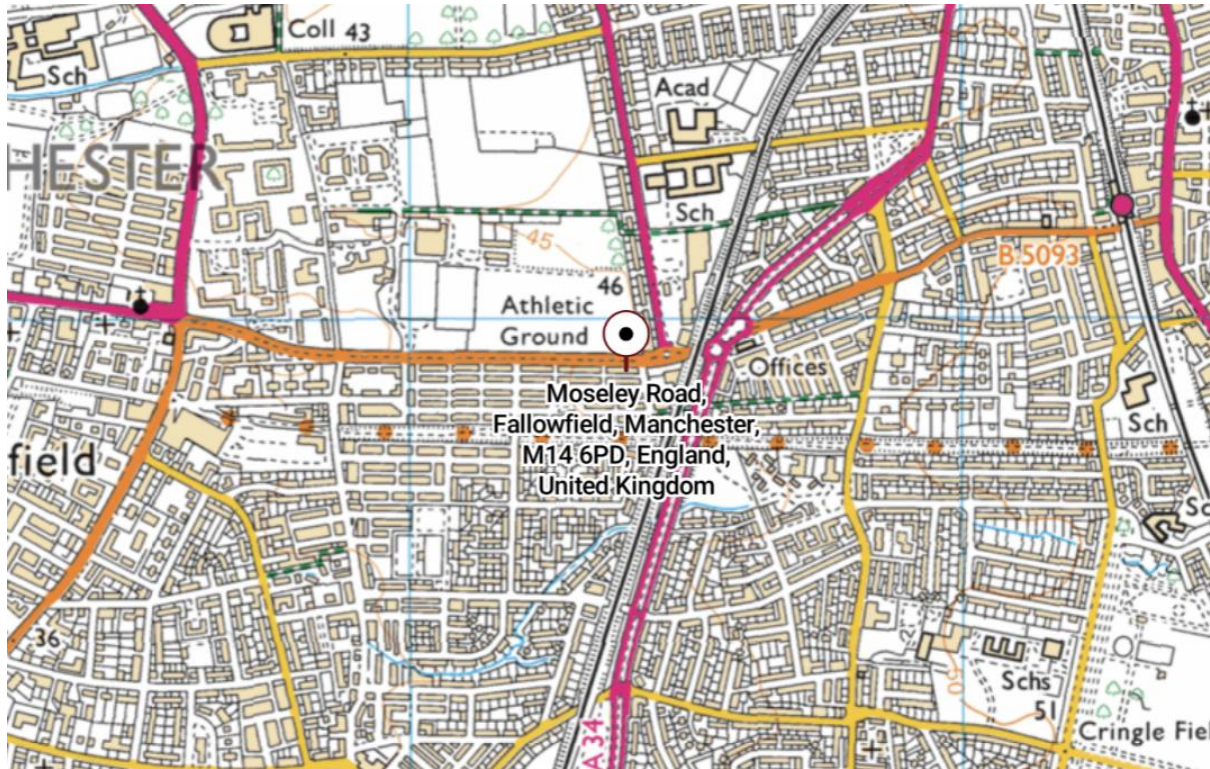


Figure 1: OS Map (Bing Maps) This content is for educational and informative purposes; so, parts of it are reproduced from BSI Global

About the author

The tree survey and this report have been completed by Carl Riva, Owner of Urban Tree Management and principal arboricultural consultant to the company.

Carl has 16 years' experience in the arboricultural sector and has a Royal Forestry Society Certificate in Arboriculture, ABC Level 6 Diploma in Arboriculture, Professional Member Arboricultural Association, LANTRA Professional Tree Inspection. Qualified and experienced to produce reports for trees in relation to design, demolition, and construction.

If you have any queries or wish to discuss further, please do not hesitate to call.

0800 222 9529 - 07765858090

Caveats and Limitations

This survey has been undertaken in accordance with industry best practice recommendations and guidance. The recorded information for each tree is a snapshot of the tree at the time of the survey. The assessments have been made to assist the client in the detailed design of works and does not consist of a condition survey for health and safety purposes. Where obvious defects have been observed these are recorded and recommendations may be made for mitigation, but this does not equate to a detailed risk assessment survey.

The comments and observations made within this report will cease to be valid either within two years of the date of the survey (unless specifically stated elsewhere within the report), or when site conditions change or any works to trees take place that have not been specified within this report, whichever is the sooner.

Unless stated differently in captions, all photographs used in this report have been taken by the author at the time of the site visit.

The location of all trees and groups detailed in this report have been these have been plotted using a handheld GPS Trimble. This is not as accurate as professional grade surveying equipment, and the locations are indicative only. Any such features have been marked on the plans and schedule.

This survey has been limited to identifying arboricultural features within the site. It therefore does not include any ecological, archaeological assessment or landscape appraisal of trees, groups, woodlands or hedges beyond the scope of BS5837: 2012 Trees in relation to design, demolition and construction ('BS5837').

Although I am occasionally involved in landscape, ecological and planning issues, I have no formal qualifications in these areas and any comments made in this report to such matters are limited to the general context in view of my familiarity through my day-to-day work, and professional advice should be obtained on these matters where required.

THE DEVELOPMENT PROPOSAL

The proposed development is for new medical centre development, new surfacing and new access into the site.

TREE SURVEY AND CONSTRAINTS

I completed a tree survey on 14th September 2025.

The survey has been carried out in accordance with the recommendations laid down by BS5837 and was a ground level survey only.

The information collected during the survey should be used to assist in the design of the site. This report includes:

- A schedule of the relevant trees to include base line data and quality assessment; and
- A plan showing the extent of constraints presented by the existing tree stock (herein after referred to as a Tree Constraints Plan (TCP)) that provides illustrative information on the constraints, for consideration during the design of the site.

The purpose of the tree survey has been to provide an assessment as to the quality and non-fiscal value of the trees on Site. This then allows guidance to be given to the design team to inform the site design and layout.

General Data Capture

For reference, individual trees are identified with the letter T and associated number on the Tree Schedules and on a plan showing the extent of tree constraints. Where the specific data on trees has been recorded:

- The stem diameter of the trees has been recorded using a rounded down diameter tape at 1.5m above ground level and have been rounded up to the nearest 10mm.
- The height of the subject trees has been estimated in meters.
- Maximum crown spread of the subject tree was measured from the edge of the trunk to the tips of the live lateral branches taken at four compass points (N-E-S-W) using a Leica Disto digital laser measure. Crown spread measurements were taken in metres.

Tree age was estimated from visual indicators (such as tree size and appearance of bark) which is provided as a provisional guide.

Groups of trees were identified with the letter G and number on the associated schedules and plans. Crown spread was assessed using topographical data to position the extents. Stem diameter of groups of trees was set as an average stem diameter of the trees within these individual groups and a maximum height of the tallest tree within the group.

Hedges are identified with the letter H and number on the associated schedule and plans. Each hedgerow was surveyed recording the species, the maximum height and the average width of the hedge. Any individual trees present within the hedgerow were recorded as an individual tree.

Woodlands and woodland groups were identified with the letter W and number on the associated schedules and plans.

If direct access to a tree was not possible, estimations from appropriate vantage points were taken. Any limitations or estimations are presented within the survey limitations section and noted in the associated schedules.

Categorisation

In compliance with Table A of BS5837 the trees surveyed have been categorised according to their arboricultural quality and value which is summarised in Table A

Categorisation

Table 1 - Summary of BS5837 categorisation colours

Category	Colour	Description
A	Green	Trees of high quality with an estimated remaining life expectancy of at least 40 years
B	Blue	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
C	Grey	Trees of low quality with an estimated remaining life expectancy of at least 20 years
U	Red	Those trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

Quality Assessment

A summary of the assessment on the quality of the trees can be seen in Table 2.

Table 2 - Summary of tree quality on site

	Category A	Category B	Category C	Category U	Total
Trees	None	3	12	6	21
Groups	None	None	None	None	None
Hedges	None	None	None	None	None
Total	0	3	12	6	21

Above Ground Tree Constraints

The above ground constraints posed by canopy spread are plotted as a continuous line around the tree, with the extent of the canopy spread hatched in the corresponding BS5837 retention category colour.

Root Protection Area

The Root Protection Area (RPA) is the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. This does not account for the actual depth of the soil within the area, nor does it account for any requirement for working space during development.

The RPA of each tree has been calculated in accordance with Section 4.6.1 in BS5837. This is determined through multiplying the stem diameter of each tree, measured at 1.5m above ground level, by a factor of 12. The below ground constraints posed by the RPA have been plotted on the TCP as a magenta line with the text RPA inscribed. The size of the RPA is capped at 15m radius from the tree

The RPA of the veteran trees has been increased in line with guidance provided by the Forestry Commission and is calculated at 15x the stem diameter or 5m beyond the canopy line (whichever is greater).

OTHER CONSTRAINTS

Soils

I have not been supplied with any detailed site soil analysis or been engaged to undertake such investigations by my client. A site-specific soil assessment may inform decisions relating to the root protection area (RPA), tree protection, new planting design and foundation design to take account of retained, removed and new trees. As and when such information becomes available results should be forwarded to the project Arboricultural consultant and other relevant professionals involved in site layout, planning, and design (e.g., structural engineer, landscape architect).

Tree Preservation Orders (TPOs) & Conservation Areas

TPOs cannot always be reliably interpreted from the documentation to identify which trees are protected, especially as time passes and site conditions change from when they were originally made. It is common for TPO plans to be inaccurate and schedules often become out of date as trees die or are removed. Frequently, trees deteriorate and, although they may be technically protected by the TPO, are in such poor condition or causing such unreasonable inconvenience that their suitability for retention becomes questionable.

In a planning context, if poor trees are assessed as unsuitable for retention, then it would be inappropriate to show them as a material constraint in development planning. For these reasons, although TPOs do need to be considered, they do not form the primary basis for tree categorisation.

Poor quality trees assessed as not worthy of retention will be shown as such, irrespective of whether they are protected or not. Similarly, good quality trees that are not protected will still be shown as material constraints. The same rationale will be applied to Conservation Areas

Forestry Act

The Forestry Act (1967) requires that permission is obtained from the Forestry Commission for the felling of any trees in England or Wales. There are certain exceptions from this requirement including the felling of trees required to allow a planning permission to be carried out .

- *An exception applies where the felling of trees is immediately required for the purpose of carrying out development that is authorised by the approval of full planning permission (granted, or deemed to be granted, under the Town and Country Planning*
- *Act 1990, including any planning conditions or s.106 agreements attached to a full planning consent). The approved planning permission will detail the extent of the approved development and may also define the trees that are allowed to be felled or those that must be retained. Any tree felling outside that boundary will require a licence.*

Tree Felling- Getting Permission (Forestry Commission)

The development exception can relate to individual or groups of trees or woodland, and for trees to be exempt from the need for a felling licence at least one of the following conditions must be met:

- *Trees must be explicitly identified in the planning consent as being permitted for removal; - the trees must stand within the footprint of the proposed development; or*
- *The removal of the trees must be necessary in order to carry out the proposed development (e.g. they block an access route to which there is no alternative, or lie in such close proximity to the proposed development that they prevent the carrying out of that development).*
- *The exception does not simply extend to all trees within the boundary of the fully approved proposed development.*

Any requirement to fell trees at the site will either require a felling licence from the Forestry Commission or planning consent.

Non-statutory considerations

A search has also been undertaken on the DEFRA MAGIC GIS mapping system to determine if the woodland on or in proximity to the Site has been designated as ancient woodland. The results indicate that there is no woodland that meets the criteria for this designation on Site.

Ancient woodland and ancient or veteran trees are considered to be irreplaceable habitat although there is no specific statutory protection afforded to such trees. However, the Forestry Commission has drafted Standing Advice for making planning decisions which is a material consideration for local planning authorities.

[Forestry Commission Standing Advice for development in ancient woodland](#)

The Standing Advice specifically states that planning permission should be refused if development will result in the loss or deterioration of ancient woodland, ancient trees and veteran trees unless there are wholly exceptional reasons and there is a suitable compensation strategy. This position is defined in the National Planning Policy Framework.

The Standing Advice also recommends that buffer zones are created around ancient and veteran trees and woodlands, and that for trees this buffer zone should be 15x the stem diameter of the tree or 5m beyond the outer edge of the canopy, whichever is the greater.

ARBORICULTURAL IMPACT ASSESSMENT

Assessing Impacts

An Arboricultural Impact Assessment is written to inform planning decision makers as to the actual and potential impact to the existing tree stock from the proposed development scheme. Impacts can be defined as being direct or indirect, and can occur over short-, medium- and long-term time periods.

- **Direct impacts** may arise from activities that result in tree removal, or as a result of root severance, soil compaction or soil contamination, all of which may cause the tree to decline and be lost. Other direct impacts include loss of vitality and exposure to pests and disease as a result of excessive canopy pruning.
- **Indirect impacts** may arise from future pressures from trees such as future growth, daylight, shading and sunlight, tree domination and/or soil movement.

The impact of any tree loss is assessed against a criterion in relation to the arboricultural significance of the loss, the detail of which is provided in Table 4. This table is not related to the quality categories provided in BS5837 but has a closer relationship to the sub-categories through assessing the impact that tree loss may have at the Site and its setting in the wider locality. This assessment is also useful in considering the impact of any potential loss against planning policy.

Table 4: Impact Assessment definitions

Scale of Impact	Definition
Major	Total loss or major/substantial alteration to key trees/features of the baseline (pre-development) conditions such that the post development character or composition will be fundamentally changed. This would generally apply to tree(s) that are of exceptional or high quality and condition and their loss would be irreplaceable. This would also include trees that have been categorised as being Ancient or Veteran, trees are rare examples of their species and or trees that offer significant amenity value to the character and setting of the area.
Moderate	Loss or alteration to one or more key trees/features of the baseline conditions such that post development character or composition of the baseline will be materially changed. This would generally apply to tree(s) that are of good quality and condition and make a notable contribution to the setting or character of the locality (visual amenity). This may include trees that would be hard to replace but for which there could be some mitigation over a medium timeframe (20-40 years).
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying

	character or composition of the baseline condition will be similar to the pre-development circumstances/situation. This would generally apply to tree(s) that are of low quality and condition and/or their loss would have low impact on the locality. These trees would be relatively easy to replace within a short timeframe (10-20 years).
Negligible	Very little change from baseline conditions with any change barely distinguishable. This would generally apply to tree(s) that are of low quality and condition, and/or their loss would barely be noticeable. Any replacement planting would offer an improvement to the setting of the site in a very short time frame (1-10 years)
No Change	There is no change to the baseline conditions to trees from the development proposal.

While development is generally considered in terms of the potential harm that may result to trees from construction processes or post-development pressures, there are also positive impacts that can accrue through development, and these will also be considered as part of the impact assessment.

The duration of the impact is also considered and is assessed as being long-term (20 years+), medium term (10 years+) and short-term (<10 years). This will help guide any compensation or mitigation that is required for losses or other impacts.

General Considerations

Development can have an adverse impact on trees and other woody vegetation within a site, which can result in:

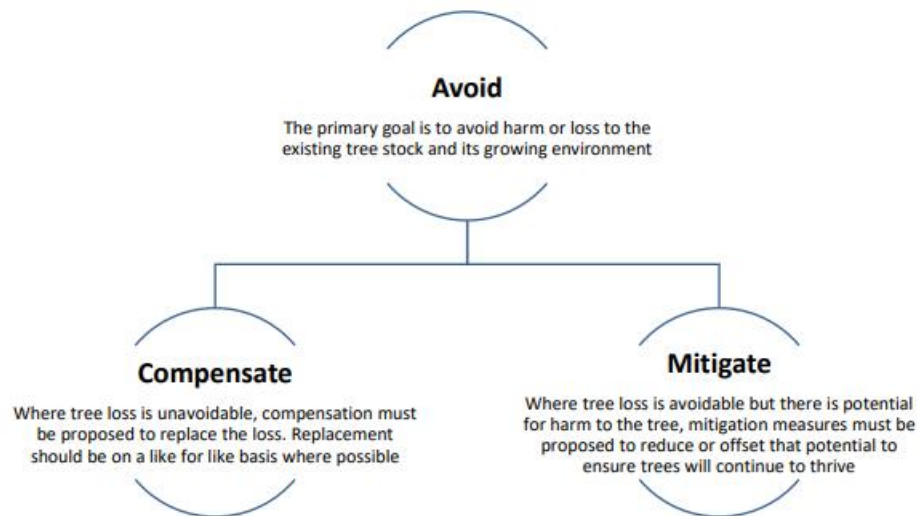
- i. Immediate tree removal to facilitate the footprint of a new development.
- ii. Potential future tree loss through the early decline of trees due to soil compaction or damage.
- iii. Root disturbance and damage within a tree's rooting area; and
- iv. Canopy removal or damage due to plant movement.

Best practice guidance proposed by the arboricultural sector seeks to ensure that there is a harmonious relationship between trees and development that will ensure that both trees and structures can be retained in the long term.

Where practical, development should seek to work with the natural environment, and development schemes that might result in harm should follow a mitigation hierarchy to ensure harm is minimised.

To assist the planning decision makers, this scheme should use the following mitigation hierarchy to consider the influence that trees might have on site design while also continuing

to make a positive contribution to the site and local character of the area, both during and post development:



Direct Arboricultural Impact

Tree Loss

The proposed development scheme will result in the loss of 10 trees. A more detailed summary of these losses is presented in Table 4.

All trees for removal have been highlighted in the tree schedule in red text and on the tree removal and retentions plan with a red dashed line.

	A	B	C	U	Grand Total
Partial Removal					
Group	0	0	0	0	0
Hedge	0	0	0	0	0
Woodland	0	0	0	0	0
Remove					
Group	0	0	0	0	0
Hedge	0	0	0	0	0
Tree	0	0	8	6	0
Grand Total	0	0	8	6	14

A review of the age profile of the loss is presented in Table 5.

Table 5: Summary of tree losses by age

	A	B	C	U	Grand Total
Partial Removal					
Mature	0	0	0	0	0
Early Mature	0	0	0	0	0
Semi Mature	0	0	0	0	0
Young	0	0	0	0	0
Remove					
Young	0	0	0	0	0
Semi mature	0	0	8	6	14
Early mature	0	0	0	0	0
Mature	0	0	0	0	0
Over mature	0	0	0	0	0
Grand Total	0	0	8	6	14

The majority of the trees are being removed for the footprint of the proposed new commercial structures & hard surfacing access into the site.

Of the removals required for the new building and surfcasting:

- 8 trees (T001, T002, T003, T004, T005, T006, T007, T014) have been assessed as being of low quality (Category C)
- 6 dead trees (T016, T017, T018, T019, T020, T021) of (Category U) quality.

Compensation for tree loss

A significant element of the project is the restore and improve the landscape of the site, and a landscape plan has been prepared with details the new planting.

- Choice and type of species (native) will be informed by soil type and species characteristic of the local landscape.
- NHBC approved planting distances of trees and shrubs from footings.
- Native hedges are most beneficial to wildlife.
- A selection of some native hedging shrubs and trees

Table 6: selection of some native hedging shrubs and trees

Hedging shrubs	Trees
Hawthorn - <i>Crataegus monogyna</i>	Field maple - <i>Acer campestre</i>
Dogwood* - <i>Cornus sanguinea</i>	Silver birch - <i>Betula pendula</i>
Beech* - <i>Fagus sylvatica</i>	Hornbeam - <i>Carpinus Betula</i>
Blackthorn - <i>Prunus spinosa</i>	Crab apple - <i>Malus sylvestris</i>
Guelder rose* - <i>Viburnum opulus</i>	Wild cherry - <i>Prunus avium</i>
Wild privet* - <i>Ligustrum vulgare</i>	Rowan - <i>Sorbus aucuparia</i>

Planting to be carried out to BS 8545:2014 Trees from nursery to independence in the landscape – Recommendations.

Impact Assessment

While the proposed scheme does require the removal of a number of trees, the losses are primarily focused on those of low quality. This proposed landscape scheme will provide more new trees than are being removed and will provide an enhancement to the setting and character of the site.

A landscape scheme will be prepared with guidance from an ecological perspective to ensure that there is a net gain in the biodiversity setting of the site.

Overall, the impact of this scheme, from an arboricultural perspective is assessed as being minor, but in a positive sense and the change will be appreciable in the short-medium term for which there could be some mitigation over a short timeframe (10-20 years).

Damage to the rooting environment

The rooting environment can be damaged through development activities that may result in compaction of the soil, severance of roots, or soil contamination. To avoid such harm, a buffer zone (the RPA) is established around each tree or group, and this is a Construction Exclusion Zone (CEZ). The risk to the rooting environment occurs when development activities take place within the CEZ.

Retained trees will have the RPA/CEZ breached by development activity, and measures will be put in place to ensure that these trees are protected from potentially harmful activities. An overview of the protection measures is provided below and in the arboricultural method statement.

Demolition

The demolition of the existing hard landscaping on the application site will have the potential to impact upon retained trees. Where these operations are to take place within the root protection area (RPAs) of retained trees, special methods of work will be required.

- These specific areas are highlighted, and precautionary measures outlined in the tree protection plan.
- Appropriate ground protection must also be laid down, to augment existing hard surfacing adjacent retained trees can be used to prevent ground compaction, in light of adjacent demolition works when existing hard surfaces has been removed.
- No works within the RPA other than those on the line of proposed works of underpinning should involve the removal of the existing hard landscape surface within the rooting area. Furthermore, the additional tree protection specifications will ensure that the root plate within the remainder of the RPA of retained trees is not damaged.
- If at any point it is deemed not possible to continue with excavations without having to damage very significant tree roots which have not already been identified by means of the trial trench already undertaken, the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted.

Buildings

Retained trees have the potential for disturbance of the rooting environment through the construction process.

Retained tree T009 especially and its base, ground level for the proposed retaining hard surfacing similar level to the proposal.

- Ground works / excavations will only take place in the where the new hard landscaping and access will be constructed as highlighted on the TPP.

The process of construction has the potential to cause harm to the rooting environment to be retained. The successful retention of all retained trees will be dependent upon measures put in place to minimise the impact of root severance for the construction of the buildings. Details of the generic methodology to be employed are given in the Arboricultural Method Statement (AMS) found in of this report.

Foundations for proposed structure and walls

For the construction of foundations for dwellings, strip method will be used. In principle, this will require the excavations to be lined with an impermeable membrane, with similar precautions to contain spillage or seepage out to into adjacent soil. Details of the generic methodology to be employed are given in the Arboricultural Method Statement (AMS) found in of this report.

Hazardous Materials

All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health, any mixing of hazardous materials is to take place outside the RPAs of all trees. Provision shall be made to ensure that the mixing area is contained so that no water runoff enters the RPA of any trees. It is anticipated that adhering to this guidance will allow all trees to be retained without long term detrimental impact on tree health.

Landscaping operations

Landscaping operations will typically take place at the end of the construction period. These works will normally require the removal of protective fencing to facilitate access for works. There is a risk that plant, and machinery may damage soil structure where tree roots are growing.

However, these risks can be managed by maintaining good professional standards of work and working to a method statement. The principle of avoiding soil disturbance or changes in levels within the RPAs of retained trees should be followed unless arboricultural advice has been sought.

Facilitation pruning

Trees do not require access facilitation pruning to enable the proposed construction works.

Future growth of retained trees, Daylight and Shading

The proposed development has considered the existing and possible future conflicts between occupants and retained trees and at this time pruning is required for risk management only (dead wood from T009).

Any pruning points established during the future pruning works should set a suitable form that repeat works can utilise (i.e., establishing a suitable pruning point for cyclical works) and shall be undertaken without detriment to the health or visual appearance of the trees concerned.

Seasonal nuisance issues can be expected to arise in the future; provision should be made for leaf guards and grills to be installed on gutters with cleanable traps on down pipes factored into the design.

Daylight and sunlight

The proposed new developments will be not subject to an element of shading although, overtime the newly planted trees may provide some shade, however, shading by trees is not considered a significant issue in relation to these proposals. It is recognised that shade from retained trees contributes to reducing the degree of internal building temperatures as caused by direct sunlight on to building,

Installation of services & drainage

Where new services and drainage runs are required, they shall be located outside the RPAs of retained trees where possible. It will be necessary to locate new service, and drainage runs within the RPAs of retained trees, it is necessary that these works be undertaken with Arboricultural supervision.

Should this not be possible then the methods of work will follow the recommendations in the National Joint Utilities Group (NJUG) guidance, in order to reduce the adverse impact to trees resulting from root damage and severance during installations; BS5837 (2012) recommends the NJUG guidance as a normative reference to be used in these circumstances.

Damage to retained tree canopy

The canopy of all the retained trees is close to the development envelope and there is not requirement for any facilitation pruning as part of this project, however, if trees require any pruning of low crowns or branches, or tying back to create space during demolition and construction, contact the supervising arboriculturist and/ or permission from LPA will be required.

Cabins and Site Facilities

The location of any site welfare facilities shall need to be considered in terms of potential impact on trees, and should all be placed outside of the protection areas of retained trees. There is ample room for the siting of cabins and storage of materials / spoil during the demolition and construction phase within the park.

Where this is not possible further advice should be sought from the appointed arboriculturist and in some circumstances, it may be possible to construct temporary ground protection and adjust fencing, but this is only to be considered as a last resort.

Principles of Tree Protection

All construction activities have the potential to cause harm to the retained trees on site. It is therefore necessary that measures are employed across the site to limit the potential for such harm and prevent any long-term negative impacts on the trees.

Arboricultural Method Statement is included within this report which provides generic details on what protective measures are required, how they will be implemented and what supervision is required to ensure that the measures remain in place and fit for purpose. It has been prepared to inform the planning and the construction/ development process.

The following principles for the protection of retained trees will be adopted across the site for the duration of the project:

- All retained trees will be protected by fencing that will form the CEZ.
- Where fencing cannot provide the necessary protection measures, alternative systems will be installed that will ensure retained trees are protected. This may include the use of either temporary or permanent ground protection.
- There will be no storage of materials, or access for construction workers or machinery within any CEZ. There will be no excavation within a CEZ. All utilities and underground services will be located outside the CEZ or tap into existing service routes.
- Any storage or mixing station located outside of a CEZ will be located in a place that minimises the risk of contaminated runoff entering the CEZ and damaging the rooting environment. This may be achieved by using a non-permeable membrane on the ground, surrounded by sandbags to contain any spillage.
- There will be no fires within a CEZ.
- There will be no use of herbicides within a CEZ.

CONCLUSION

A tree survey has been carried out to determine the extent, age and quality of the tree stock across the site.

Overall, the processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made in this report, tree protection plan and described in the Arboricultural method statement.

The end use of the site is to construct new housing development, retaining wall, new surfacing the application site. The balance of the building design, location and trees to be retained throughout the site is thought to be satisfactory and should not lead to loss of trees.

Issues to be addressed by the arboricultural method statement and tree protection plan.

- Communication methods with the contractor and the appointed arboriculturist
- Tree work specifications
- Methods of Working close to trees
- Installation of tree protection barriers
- Installation of trunk protection
- Installation of temporary compaction boards
- Cabins and site facilities location
- Arboricultural supervision timeline of critical activities during demolition and construction

REFERENCES

- Town and Country Planning Act 1990 www.legislation.gov.uk/ukpga/1990/8/contents
- Gov.uk (2021) National Planning Policy Framework.
- BS 5837 (2012) Trees in relation to design, demolition, and construction – Recommendations, BSI www.shop.bsigroup.com/
- BS 8545 (2014) Trees: from nursery to independence in the landscape – Recommendations, www.shop.bsigroup.com/
- BS 3998 (2010) Tree work – Recommendations, BSI www.shop.bsigroup.com/
- Trees in the Townscape: A Guide for Decision Makers, published by the Trees & Design Action Group <http://www.tdag.org.uk/>
- National Joint Utilities Group (2007) Volume 4, Issue 2: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees www.njug.org.uk/publications/
- British Geological Society (2022) Geology of Britain Viewer. [Available online] (Accessed 28/08/2024)

GLOSSARY OF TERMS

Ancient - An ancient tree is exceptionally valuable, although very few trees reach the age to be classified as ancient. Unlike Veterans, ancient is an age classification, and attributes can include its age, size, condition, biodiversity value as a result of significant wood decay and the habitat created from the ageing process, and/or cultural and heritage value.

Arboricultural Method Statement - methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.

Cellular Confinement System - Used for ground protection in areas where tree root damage would be caused by digging into the ground to lay a conventional sub-base for new hard surfacing and where the long-term viability of trees could be harmed if the soil is at risk of becoming compacted or contaminated. A cellular confinement system is a series of geocells arranged in a honeycomb-like formation that is combined with an underlying geotextile and angular stone to spread loads in such a way as to minimise compaction of underlying soil.

Conservation Area - An area recognized in the Town and Country Planning Act 1990 as being 'of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance'. Trees may make a significant contribution to the character of a conservation area, so any works to trees in a conservation area will require notification to be made to the local authority, which then has six weeks to consider the works. Notice may be submitted as part of a planning application, provided that the required works are clearly stated.

Construction Exclusion Zone - area based on the root protection area from which access is prohibited for the duration of a project.

Early mature – Age class of a tree in its life cycle between youth and maturity, getting close to reaching its maximum potential (see Mature), but still increasing in size and spread.

Facilitation Pruning - one-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to enable consented operations on site.

Maiden – A tree that has never been altered by pruning. **Mature** – Age class of a tree that reached its maximum growth potential (height and spread) for the species and environment conditions. 20-80% of a tree's life can be spent in the mature stage.

Over mature – Age class of trees that are still close to their full height and crown size, but showing indication of senescence with retrenchment (slow reduction) of the overall canopy size. The main stem diameter (which by now is large) increases more slowly. Some veteran characteristics may start to appear.

Root Protection Area (RPA) - layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

Senescence - The late stage of a tree's life characterized by a decline in the volume of the crown and root system

APPENDIX A - BS 5837 (2012) Cascade chart for tree quality assessment

Trees unsuitable for retention (See Note)				
Category and definition		Criteria (including subcategories where appropriate)		Identification on plan
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years		- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of another category U trees. (e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality. NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7		Red
Trees to be considered for retention				
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g., the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands See Table 2 of significant conservation, historical, commemorative or other value (e.g., veteran trees or wood-pasture)	Green
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g., presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	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	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	Grey
ROOT PROTECTION AREA (RPA): These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter measured at 1.5m above ground level, but the shape of the RPA may be altered where site conditions dictate that there are sound reasons to do so.		VETERAN OR ANCIENT TREE BUFFER (VTB/ATB) In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree’s canopy if that area is larger than 15 times the tree’s stem diameter.		ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW) In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.

SPECIAL IMPORTANCE:

Trees that are particularly notable as high value trees such as ancient trees/woodland, or veteran trees. Such trees may be regarded as the principal Arboricultural features of a site, and pose a significant constraint to potential development. An ancient tree is one that has passed beyond maturity and is very old compared with other trees of the same species. Very few trees reach the ancient life-stage.

Veteran trees are often very old, but not necessarily so; they may be regarded as 'survivors' that have developed some of the characteristic features of an ancient tree but have not necessarily lived as long. All ancient trees are veterans but not all veteran trees are ancient.

An ancient woodland is an area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland (ASNW), plantations on ancient woodland sites (PAWS) and ancient replanted woodland (ARW)

QUALITY CATEGORY:

Trees are classed as category U, A, B or C, based on criteria given in BS5837:2012; summary definitions as follows (see BS5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value:

1. Arboricultural qualities
2. landscape qualities, and
3. cultural, historic or ecological/conservation qualities.

Examples of these qualities for each of the three categories are given below, although these are indicative only. Note: This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees' general suitability for retention.

ROOT PROTECTION AREA (RPA):

These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter measured at 1.5m above ground level, but the shape of the RPA may be altered where site conditions dictate that there are sound reasons to do so.

VETERAN OR ANCIENT TREE BUFFER (VTB/ATB)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's stem diameter.

ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.