



A view of the trees most impacted upon near where the proposed development is located

ARBORICULTURAL IMPACT ASSESSMENT

Date of the Inspection

26th July 2023

Site

Millwood School
School St
Radcliffe
Manchester
M26 3BW

Description

The development of a new building and its associated landscaping

Instructed By

Beechwood Industries Ltd

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Executive Summary

Treestyle Consultancy was commissioned to complete a survey to specifications set out in British Standard 5837:2012 *Trees in relation to design, demolition & construction - Recommendations*. This document is an Arboricultural Impact Assessment (AIA) which explains the Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP).

The Tree Survey recorded dozens of trees located within the proposed area and next to the site entrance many of which are within influencing distance of the proposal.

- Seven trees were recorded as **category A high quality with 40 years plus life potential**.
- Twenty two individual trees and a group of trees were categorised as **B medium quality with up to 20 years life potential**.
- Nine individual trees and one group of trees were recorded as **low quality and value with up to 10 years life potential**.
- No trees were recorded as **category U, not realistically retainable**.

Generally the green infrastructure has excellent life potential and visual aesthetics.

The Proposal

- The creation of an access to the proposed area to be developed.
- The development of a new school building.
- The landscaping around the new building.

The Arboricultural Impact Assessment (AIA)

- Currently the Root Protection Areas (RPA) of high quality trees are being used for storage of materials.
- The removal of nine small trees to accommodate the new development.
- The movement of waste and building materials over the RPA's of trees.
- The development of fencing on the RPA.
- Trees all around the proposal have the potential to be impacted directly and indirectly.
- Trees are located on a lower profile than that of the construction as there is potential for building materials to be released in storm water and then leached into the soil profile.

Tree Category	Trees to be retained	Trees to be removed
A	T1, T2, T7, T10, T11, T14, T23	-
B	T3, T5, T8, T9, T13, T15, T19, T21, T26, G28, T29, T30, T31, T32, T43	T6, T33, T34, T35, T36, T37, T38, T39, T40,
C	T4, G16, T17, T18, T22, T20, T24, T25, T27	T12
U	-	-

Table 1 - Summary of BS5837 Categorisation Colours in relation to the tree to be retained and removed, the explanation of this categorisation can be read in Appendix C - BS 5837:2012 Cascade Chart for Tree Quality Assessment

The Recommended Sequence of Work Operations

- All recommended tree work scheduled in Appendix A to be carried out.
- The clearing of building materials from around the RPA's of retained trees.
- Installation of tree protection measures.
- The creation of access to the proposed area.
- The development of the school building.

Tree Protection Plan (TPP)

- Prior to any construction commencing tree work must be implemented as specified in Appendix A.
- The Root Protection Areas (RPA's) of retained trees should be measured and marked out.
- Arboricultural supervision is required where an existing permeable RPA requires investigation prior to development.
- The preparation of the landscape shall adhere to good management and be brought back (where possible) away from protected trees.
- Ground Protection shall be installed over their RPAs preventing soil compaction and contamination, this can also increase work space around the development.
- The excavation of surfaces within an RPA must be performed with hand tools only and under arboricultural supervision and roots immediately covered with hessian cloth.
- Fencing to be installed all around the proposed area for development which will remain for the duration of the landscaping preparation and development
- Designated areas for the storage of building materials with a Ground Protection installed beneath to prevent spillages.
- Footing for fencing shall be dug with hand tools where a non-permeable membrane installed.
- The RPA's of the retained trees are a Construction Exclusion Zone (CEZ) unless protected by the aforementioned.
- Designated areas for the site facilities.
- Tree removal shall be mitigated with tree planting 2 for 1 with post planting management.
- Soil contamination and compaction within an RPA must be avoided.

The removal of trees must be mitigated with tree planting in the area of development.

It is important that the caveats and limitations of this report are understood.

1.0 Introductions

Instruction

- 1.1 I have been instructed by Beechwood Industries Ltd to prepare an arboricultural impact assessment, tree protection plan and arboricultural method statement with regards to the development of a new building and areas for recreation in accordance with BS 5837 Trees in Relation to design, demolition and construction - recommendations 2012.

Scope

- 1.2 The scope of this instruction has been to:
- Undertake a tree survey to determine the range, age and quality of trees within influencing distance of the redevelopment.
 - Provide advice and guidance to the project design team on all matters relating to trees with the exception of ecological matters or landscape design.
 - Prepare the required reports and plans which will give guidance on how the development can be performed whilst allowing for tree retention and longevity.
- 1.3 The tree survey was to be conducted in accordance with the guidance provided in BS5837 (2012) *Trees in relation to design, demolition, and construction - Recommendations* ('BS5837').
- 1.4 All plans and reports following the tree survey were also to follow the recommended processes defined in BS5837 and any other industry advice that provides best practice guidance for managing the relationship between trees and construction processes.

Site description

- 1.5 Located within a residential area of Radcliffe. There are predominately residential housing and their associated gardens to the south with a large area of wasteland to the east and a canal lining the northwestern boundary. The existing school buildings are located centrally which is predominately hardstanding areas. Car parking and access are located southeast of the existing school buildings.
- 1.5.1 The area to be developed is in the south western corner of the existing site and predominately within a grassed area. A second existing entrance is located centrally on the southern boundary where site facilities are currently located.
- 1.5.2 A group of trees within the grassed area for recreation is surrounded by the aforementioned hard standing areas to the east and trees which line the embankment which descends down towards the canal where most of the trees are located. These are key features of the landscape with great life potential and essential for the stabilisation of the embankment.



2.0 Tree Survey

2.1 The survey recorded individual trees, groups of trees and an overgrown hedge within and all around the boundaries, these are listed below:

- The green infrastructure as a whole has good life potential and visual aesthetics.
- Most trees have relatively moderate to low occupancy target areas such as public footpaths, however, the sensitivity of staff and children being beneath these trees may be low, failure would be catastrophic.
- A large mature poplar tree has been heavily pollarded.
- A couple of trees house mechanically weak structures.
- Ash dieback (*Hymenoscyphus fraxineus*) (ADB) has been identified on site.
- Two high category trees and their RPA's are being used for storage.

Tree Category	Tree Identification
A	T1, T2, T7, T10, T11, T14, T23
B	T3, T5, T6, T8, T9, T13, T15, T19, T21, T26, G28, T29, T30, T31, T32, T33, T34, T35, T36, T37, T38, T39, T40, T43
C	T4, T12, G16, T17, T18, T20, T24, T25, T27
U	-

Table 2 - Summary of BS5837 Categorisation colours in relation to the tree numbers

General Data Capture

- 2.3 For reference, all individual trees are geo referenced with a Trimble TDC600 and identified with the letter T and associated number on the Tree Schedule and on a plan showing the extent of tree constraints. The stem diameter of the trees on Site was recorded using a rounded down diameter tape, measured at 1.5m above ground level. Measurements were recorded in millimetres, rounded to the nearest 10mm.
- 2.3.1 The height of the subject trees was estimated to the nearest metre.
- 2.3.2 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.
- 2.2.3 The trees age was estimated from visual indicators (such as tree size and appearance of bark) which is provided as a provisional guide.
- 2.2.4 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.
- 2.2.5 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

- 2.3 In compliance with Table 1 of BS5837 the trees surveyed have been categorised according to their arboricultural quality and value (non-fiscal) which is summarised below in Table 2.

Quality Assessment

- 2.3.1 A summary of the assessment on the quality of the tree can be seen in table 3.

Table 3 - Summary of BS5837 Tree Categorisation

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 10 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

3.0 Tree Constraints

Above Ground Tree Constraints

- 3.1 The above ground constraints posed by canopy spread are plotted on the Tree Constraints Plan as a circle around the tree with the extent of the canopy spread in the corresponding BS5837 retention category colour.

Below Ground Constraints

3.2 Root Protection Areas

- 3.2.1 The Root Protection Areas (RPA) of the trees were calculated in accordance with Section 4.6.1 in BS5837. This is calculated from the measurement of the stem diameter as recorded in the tree schedule attached to this report and is plotted on the TCP. Trees lining the southern boundary have had their RPA adjusted.
- 3.2.2 The RPA forms the initial Construction Exclusion Zone (CEZ) to protect the trees within and adjoining the site and is plotted on the plan by an orange line with the text RPA inscribed.
- 3.2.3 The RPA is initially plotted with the tree in the centre. Where site conditions may influence the shape and size of the RPA (e.g. the presence of roads, buildings or other structures), the shape and size of the RPA can be amended in accordance with Section 4.6.3 in BS5837.
- 3.2.4 The default position should be that no development will take place within the RPA of retained trees. However, where there is an overriding need for construction and associated activity within the RPA of trees, measures should be put in place to protect retained trees from harm while those activities are being carried out.

Soils

- 3.3 BS5837 recommends that a soil assessment be completed by a competent person to inform decisions relating to the RPA, tree protection, new planting design and foundation design. I am not able to provide this assessment as I have no formal qualifications in this area, and professional advice should be taken to provide any detailed reports.
- 3.3.1 However, generic soil data is freely available from online sources such as the Geology of Britain which can provide a broad indication of the underlying geology of a site. The results of a search for this site describes the texture being a free draining sandy soil.
- 3.3.2 The soil type will have an impact on any recommendations for replacement or enhancement planting that may form a part of any landscape strategy for a planning application.

4.0 Development Proposal

- 4.1 The proposal is for:
- The creation of access to the proposed area to be developed.
 - The development of a new building.
 - The landscaping around the new building.

5.0 Arboricultural Impact Assessment (AIA)

- 5.1 Presence of Tree Preservation Orders (TPO) are planning law. Although Bury Councils website indicates this is not in a conservation area and that there are no TPO's trees, I would advise that there are trees that any requirement for tree work must be approved by the Local Planning Authority.

5.2 Effects of the trees with regards to the development.

- 5.2.1 The grounds have seen tree planting over the years with a dozen small trees being planted. Several larger mature trees, some of which have been documented as having mechanically weak structures, have the potential to fail. Concerns with the changing environment surrounding these trees raise the risk level from low to high with sensitive targets such as people, vehicles, buildings and structures.

- 5.2.2 Trees can shed leaves, deadwood and occasionally branches. They can shade buildings and areas for recreation which can result in the occupants requesting tree works that can have a detrimental effect to tree health.

- 5.2.3 Development and the removal of so many trees can alter the water table within a site which can cause irreversible stress resulting in tree removal.

- 5.2.4 As trees grow and naturally expand their root areas, canopy development and stem thickening can present future issues. As they increase in height they will produce extra shadow onto land that was previously open.

- 5.2.5 Trees can produce effective screening from neighbouring properties, noise from roads, absorb pollution, increase wildlife and reduce energy bills in winter. Additionally deciduous trees in winter allow sunlight through, they also screen people from hot sun in summer and help to reduce air-conditioning costs. Having mature trees on a newly created development can add a sense of establishment and longevity, create social calming and reduce stress levels.

5.3 Potential incompatibilities between the layout and the trees proposed for retention.

- 5.3.1 Drawing 1 - Tree Constraints Plan shows where development incurs onto RPA's of trees to be retained. Development shall be carried out without soil compaction or soil stripping and laid in accordance with the Arboricultural Method Statement section 13 (Hard Surfaces).

5.4 Infrastructure Requirements

- 5.4.1 The services could have a direct impact on retained trees. Specifically with T2 as its roots may be found in the permeable area of the attenuation tank, especially in light of the existing hard standing surfaces being non-permeable causing tree roots to venture to a more favourable environment.

BS5837 Categorisation			
	A high quality 40 years plus life potential	B moderate quality up to 20 years life potential	C low quality Up to 10 years life potential
Remove	-	T6, T33, T34, T35, T36, T37, T38, T39, T40,	T12
Arboricultural supervision	T7, T10, T11	T5, T9, T30, T31, T32	-
Pruning	-	-	T27
Protect	T1, T2, T7, T10, T11, T14, T23	T3, T5, T8, T9, T13, T15, T19, T21, T26, G28, T29, T30, T31, T32, T43	T4, G16, T17, T18, T22, T20, T24, T25, T27
Post development considerations	Regular assessments	Regular assessments & Tree Replacement	Regular assessments & Tree Replacement

Table 4 highlights the summary of works to be carried out

5.5 Mitigating Tree loss/new Planting

- 5.5.1 Due to a number of trees being removed because of health and safety there is now a requirement for mitigation with tree replacement which falls under council policy to replace 2 for 1.

5.6 Proximity of Trees to the Development

- 5.6.1 The impact of trees on the demolition, development and vice versa in allowing for future growth have all been considered. Tree size, future growth, light/shading, leaf and fruit nuisance etc have the potential to be an issue. This applies to all trees where there is potential for indirect impact on by the proposed demolition and development.
- 5.6.2 The creation of access to the area to be developed will require the removal of a small mountain ash (*sorbus aucuparia*) T6.
- 5.6.3 The movement of building materials on and off site passes over the RPA's of several high quality trees T1, T2 & T5.
- 5.6.4 The development of the new building falls close to and incurs on T9, T10, T11.
- 5.6.5 The development of fencing falls close to and incurs on T30, T31, T32.
- 5.6.6 Overall the processes of the construction are likely to have a detrimental effect upon the health of the retained trees if the site is poorly managed. As long as the recommendations made in this report are adhered to at all times by the contractors e.g. the positioning of a fence between the retained trees, the storage of building materials, construction activities which should be in place prior to the commencement of works and remains intact and in position throughout the duration of the construction activities then minimal damage should occur to the trees.

6.0 Arboricultural Tree Constraints

- 6.1 There are below ground constraints with T6, T33, T34, T35, T36, T37, T38, T39, T40 & T12 which have been recommended for removal to accommodate the proposed new building.
- 6.2 The development of fencing falls close to and incurs on T30, T31, T32.
- 6.3 The development of the new building falls close to and incurs on T9, T10, T11.
- 6.4 The egress of materials from the excavation of surfaces pass over the RPA's of category A trees.
- 6.5 There is room for the storage of building materials, however this will require good management with regards to its storage and location to prevent leaching onto RPA's.

7.0 Tree Protection Requirements

- 7.1 The following is required:
 - Arboricultural supervision is required where the excavation of surfaces are near to or incur onto RPA's of retained trees.
 - The creation of Construction Exclusion Zones (CEZ's) where protective fencing is to be installed.
 - The creation of a safe storage area for building materials will see the prevention of storm water washing down to a lower terrain.
 - The creation of an area for site facilities.
 - The proposed developments fall within the RPA's of trees, therefore Ground Compaction shall be installed to create an extended work space.
 - Any exposed roots must immediately be covered with hessian cloth.
 - RPAs must be protected from building materials with a non-permeable membrane.

8.0 Tree Protection Plan (TPP)

8.1 Tree Protection Plan (TPP) to identify:

- Trees to be retained as seen in Drawing 2 - Tree Protection Plan.
- Protective measures to highlight the Construction Exclusion Zones (CEZ).
- Measurements such as RPA's marked out.
- Identify fence and Ground Protection as seen in Drawing 2 - Tree Protection Plan.
- The location of contractor storage and facilities areas.

8.2 Construction Exclusion Zone (CEZ)

8.2.1 Works undertaken within a CEZ must have arboricultural supervision and be carried out with hand tools only. The CEZ is to be afforded protection at all times normally by fencing, unless permitted access is required and is part of the TPP. A protective fence shall be erected prior to the commencement of any site works e.g. before any materials or machinery are brought on site, development or the removal of the existing surfaces commences. The fence shall have signs attached to it stating that this is a CEZ and that NO WORKS are Permitted within the fence. The protected fence may only be removed following completion of all construction works.

8.2.2 The fence is required to be sited in accordance with the TPP enclosed with this method statement as Appendix D - Tree Fencing. However, the situation may not suit the requirements in BS 5837 2012 and therefore an alternative which must be fit for the purpose of excluding any construction activity.

8.3 Access Details

8.3.1 All access for construction equipment will be through the existing entrance to the south.

8.3.2 Contractors car parking

8.3.3 On site parking has ample space.

8.3.4 Site huts and toilets

8.3.5 On site.

8.4 Storage Space

8.4.1 There is room on site within highlighted areas to store building materials. Therefore no permeable surfaces can be used for the storage of building materials and general site management. However, additional protection will be required for the prevention of stormwater damage washing materials onto an RPA.

8.5 Tree Protection

- 8.5.1 Fencing must be applied all around the new green spaces to create a CEZ once these areas have been completed. This shall rest upon ground protection for the duration of the development.
- 8.5.2 Temporary ground protection is required where development falls next to an RPA. This shall prevent soil compaction and contamination and allow for extended work space around development. Protective fencing shall rest upon this creating and CEZ.

<https://www.ground-guards.co.uk/sectors/tree-root-protection/mu2-3/>

TREE ROOT PROTECTION METHOD

GroundGuards trackway mat systems are frequently used on construction sites to protect the ground from erosion and damage by construction vehicles. Where a temporary roadway must pass near to trees, the following extra precautions must be taken in order to provide cushioning for the ground under the tree canopy:

1. Edge rails of 200 x 50mm sawn timber should be installed where the trackway will pass under the tree canopy. These should be staked on either side of the trackway using 50 x 50 x 500mm timber stakes at 1.5m spacings.
2. A layer of geotextile membrane should be laid to cover at least the area under the tree canopy and preferably under the whole of the trackway.
3. A pad of trackway mats should be laid on top of the geotextile membrane, between the timber rails.
4. A 150mm deep layer of wood chipping should be laid over the mats
5. The trackway can then be laid so that it rises over the wood chippings as it passes under the tree canopy.

50x50x500 timber stakes
200x50 timber rails
Geotextile Membrane
Base layer of trackway mats
Wood chippings
Upper layer of trackway mats



8.6 Hard Surfaces

8.6.1 Hard surfaces

- 8.6.1 Where hard surfacing within an RPA of a retained tree is to be removed, then direct onsite arboricultural supervision is required. Its removal shall be brought back away from trees and hedges and any exposed RPA's and where relevant they must be protected with Ground Protection.
- 8.6.2 There must be no compaction of soil within an RPA. However, the wearing course will be broken up using a hand held pneumatic breaker, hand tools and wheelbarrows to break up and remove the surfacing. Where it is necessary to remove the sub base this is to be undertaken using a fork to loosen the material and moved using shovels and wheelbarrows.
- 8.6.3 In some situations and at the discretion of the appointed arborist it may be possible to use an excavator using a hydraulic breaker and a suitably sized toothless grading bucket. If an excavator is to be used it must be situated outside of the RPA's, on top of the hard surfacing working away from the RPA's or alternatively using Ground Protection.
- 8.6.4 Whichever system is used there is to be no disturbance of the soil beneath. If roots are found they are to be covered overlaid with a damp hessian cloth and a layer of either sharp sand, wood chip or top soil applied as soon as practically possible.

Landscaping of Surfaces to Install Infrastructure

- 8.6.5 No information for the installation of services has been provided.
- 8.6.6 The creation of a fenced area to the north falls onto the RPA of T31, T32 & T33 where the footing shall be protected with a non-permeable membrane.

8.6.7 Landscaping

- 8.6.8 The landscaping around the proposed building requires a no dig methodology where hand tools only are to be used. The excavation of surfaces with T9, T10 & T11 prior to the commencement of the proposed development shall be supervised by the appointed arboricultural consultant.

Movement of Materials

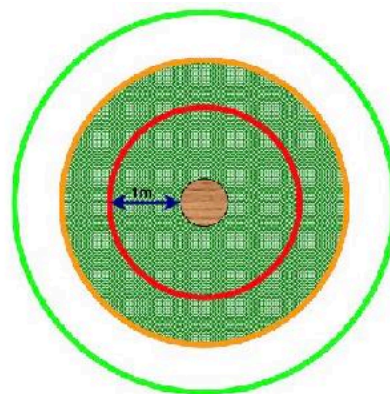
- 8.6.9 Where egress of the materials passes over the RPA's of retained trees shall be protected with a tarmac surface. Where a permeable RPA is required for movement then a Ground Compaction is required. This shall remain in place for the entirety of the construction.

8.7 Installation of Underground Service's

- 8.7.1 With a RPA of retained trees needing to be developed then no roots greater than 25mm shall be damaged. The use of an air spade to excavate the RPA required for services shall be performed under arboricultural supervision.
- 8.7.2 Please refer to this document with guidance NJUG Publication: Volume 4: Issue 2: 16/11/2007:

<http://streetworks.org.uk/wp-content/uploads/V4-Trees-Issue-2-16-11-2007.pdf>

<http://streetworks.org.uk/wp-content/uploads/2016/09/V4-Trees-Issue-2-Operatives-Handout.pdf>



TREE PROTECTION ZONE

Key to Diagram



Trunk of Tree



Spread of canopy or branches



PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with Local Authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.



PRECAUTIONARY ZONE – 4 x tree circumference. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with Local Authority Tree Officer if in any doubt.



PERMITTED ZONE – outside of precautionary zone. Excavation works may be undertaken within this zone however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

Existing Underground Services

8.7.3 Existing services within the site should be retained where ever possible. Where existing services within RPAs require upgrading, the upmost care must be taken to minimise disturbance, and where feasible trenchless techniques are to be employed, and only where necessary should open excavations be considered.

8.7.4 There are three main types of trenches techniques, these include guided and unguided boring and pipe replacement by lining or bursting. These allow for the installation, maintenance or renewal of underground services without disturbance of soil in which roots are likely to be growing. Starting and receiving pits for the boring machinery are to be located outside of the RPA's of any retained trees, with the bore depth being maintained at a minimum depth of 600mm below the existing ground level.

8.8 Additional Precautions

8.8.1 No storage of materials, lighting of fires will take place within any construction Exclusion Zone. No mixing or storage of materials will take place up a slope where they may leak into a Construction Exclusion Zone.

8.8.2 No fires will be lit within 20 metres of any tree stem and will take into account fire size and wind direction so that no flames come within 5m of any foliage.

8.8.3 No notice boards, cables or other services will be attached to any tree.

- 8.8.4 Materials which may contaminate the soil will not be discharged within 10m of any tree stem. When undertaking the mixing of materials it is essential that any slope of the ground does not allow contaminants to run towards a tree root area.

8.9 **Responsibilities**

- 8.9.1 It will be the responsibility of the main contractor to ensure that the planning conditions attached to planning consent are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site. The main contractor will be responsible for contacting the Local Planning Authority at any time issues are raised related to the trees on site. If at any time pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998 Recommendations for Tree Works 2010.
- 8.9.2 The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site. The fencing and signs must be maintained in position at all times and checked on a regular basis by an on site person designated that responsibility.
- 8.9.3 The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

9.0 Arboricultural Method Statement (AMS)

9.1 Method for the construction of a new building, the excavation of surfaces near to RPA's.

The development of new building structures and its management around trees.

- 9.1.1 The AMS has been written as guidance on how the development has to be carried out with regards to the protection of the green infrastructure. It is imperative that this is carried out correctly with good management. There are three key developments with the proposal which need to be addressed.

9.2 An Overview of the Sequence of Operations

In overview, it is necessary to undertake the following sequence of operations in relation to arboricultural input for development operations.

1. Method Statement approved by the LPA.
2. Undertake tree works as recommended in [Appendix A - Tree Schedule](#).
3. Installation of the tree protection measures including the protective fencing and Ground Protection.
4. Pre Commencement meeting confirming the fencing to specification.
5. Excavation of surfaces to install infrastructure.
6. Demolition.
7. Construction of the development.
8. Removal of tree protection.

9.3 Sequence of Operations

1. Creation of site access.
2. Tree protective fencing and Ground Protection installed.
3. Site investigation by the appointed arboriculturalist to ascertain that no roots will be damaged concerning trees T9, T10 & T11.
4. The excavation of the landscape.
5. Development of infrastructure.
6. Development of the new building.
7. Removal of tree protection.
8. Tree planting.

9.4 Sequence for a "No dig solution" for the investigation

Site meeting with the appointed arboricultural consultant to explain the process and supervise the investigation.

1. No dig areas marked up.
2. Vegetation removed and the 50mm of top surface excavated with hand tools.
3. Identification of tree roots will determine areas for cellular confinement.
4. No roots greater than 50mm can be severed.
5. Tree roots must be immediately covered with hessian cloth and not exposed.
6. Failing the discovery of roots through the investigation then a traditional driveway construction shall be applied.

- 9.5 The following timeline table informs the key principles for development operations proceeding in relation to arboricultural requirements conditioned as part of this method statement. The action and timescales within this table must be adhered to in order to discharge the arboricultural method statement planning condition for this site.
- 9.5.1 The precise time and order of some of the development operations may need to be changed due to site specific operational requirements, yet any operations that may affect the trees on the site must be done so under arboricultural supervision by a suitably qualified and experienced arboricultural consultant.

Table 5 highlights the sequence of the operations with regards to the arboricultural method statement.

Sequence of Operations		
Stages	Action	Arboricultural Input
1 Approval	This AMS is submitted to and approved in writing by the LPA	If necessary, liaise with contractor and LPA to discuss methodologies detailed
2 Tree Works	If required, the tree removals should be carried out as the first operation on site and in accordance with Appendix A - Tree Schedule	Review the tree work requirements with the tree contractor. If necessary liaise with the contractor on site during tree work
3 Tree Protection	Installing the tree protective measures will take place prior to any storage of plant, materials and machinery.	If necessary, liaise with appointed arborist for the following: Protective fencing according Appendix E - Fencing and Ground Protection. Installation of the cellular confinement installed to the standard specified in Appendix F
4 Site Meeting	Following installation of tree protective measures, the LPA shall be invited to inspect the fencing and discuss any other site operations that have implication for the trees	Meeting with the representative of the LPA and the site manager. Alternatively, contractor can confirm the fencing and tree works are as specified by taking photographs of the tree protection measures
5 The Demolition and Construction	The installation of the ground protection for the access and egress will aid the landscaping and eventually the construction	The appointed arborist to ensure not tree roots are to be damaged and if any issues are adequately resolved at each stage of the landscaping and development. Any work within an RPA must be overviewed by the appointed arborist
6 Site Finishing	Removal of the tree protection measures must only be undertaken when all site traffic and machinery has left the site	If acceptable to the LPA the contractor can take photos of the site to give to the LPA to gain approval for the removal of protective fencing
7 Tree Planting	Once construction and any landscaping has been completed then tree planting for mitigation	Tree planting should be read in conjunction with a tree and landscaping scheme

10.0 Conclusion

- 10.1 The construction activity may affect future trees if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees are specified and implemented through the Arboricultural Method Statement included in this report, the development proposal will have no long-term detrimental impact on tree health or the contribution of trees to the character of the wider setting. For these reasons, I conclude that the proposed development would not cause an unacceptable or adverse impact on the long-term vitality of the retained trees, and therefore the character and appearance of the area. Furthermore, it fully aligns with the broad guidance set out in the National Planning Policy Framework.

11.0 Recommendations

- 11.1 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 construction.
- 11.2 The tree surgery works 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 Treestyle Consultancy Ltd, 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 Local Planning Authority, cannot be the responsibility of this practice.

Signed  Date 4th August 2023

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12.0 Caveats and Limitations

- 12.1 While all reasonable efforts have been made to identify the condition and quality of the trees on site, the statements made in this report and schedules do not take into account the effects of extreme weather events, vandalism or accidents, or changes to the site that may affect trees that have taken place since the date of the survey.
- 12.2 I can confirm that the survey has been undertaken in accordance with industry best practice recommendations and guidance, but no warranty is provided in relation to changes to the site that occur after the date of the survey that may have an impact on the tree stock present at the time of the survey.
- 12.3 Unless stated differently in captions, all photographs used in this report have been taken by the author at the time of the site visit.
- 12.4 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 sooner.
- 12.5 The survey has been undertaken with the benefit of a mapping supplied by The Ordnance Survey. The location of all trees and groups detailed in this report have been taken from the topographical survey and no warranty is given as to the accuracy of this data.
- 12.6 This survey has been limited to identifying arboricultural features within the site. It does not include any ecological assessment or landscape appraisal of trees, groups, woodlands or hedges beyond the scope of BS5837.
- 12.7 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.

13.0 References

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NTSG - Common Sense Risk Management of Trees

Principles of Tree Hazard Analysis and Management - D Lonsdale No 7

14.0 About the Author

- 14.1 Treestyle Consultancy's principle assessor is Andrew McLoughlin, the Managing Director of Treestyle Consultancy Ltd since 2001. I have a MA ArborA in Arboriculture. Qualified Arboriculturalist since 1998. I am also a qualified teacher and a LANTRA instructor and assessor. ISA Tree Risk Assessment Qualification, Quantified Tree Risk Assessor. Ancient and Veteran Tree Expert. Up to date Curriculum Vitae (which include records of up to date Continued Professional Development - CPD) can be provided upon request.

15.0 Site Photography

Looking east towards the area where site access is required over and next to the RPA's trees.



Looking west where T9, T10 & T11 may cause above and below ground constraints

Bottom looking north where several small trees are to be removed to accommodate the proposed building

