

Arboricultural Method Statement



Highwood Homes Limited



Moorhill



Site:
Moorhill, Moorhill Road, West End,
Eastleigh, SO30 3AZ



Ref:
February 2023
JFA0289 V2





ARBORICULTURAL METHOD STATEMENT

Client:

Highwood Homes Limited

Site:

Moorhill, West End

Arboricultural Consultant:

James Fuller *FdSc.Arb, BTEC Nat.Dip Arb*

Date:

October 2022

SUMMARY

The proposal is for the construction of a 70-bed purpose-built care home (Use Class C2); associated access, parking, landscaping, sustainable drainage, electricity sub-station, other structures and works; following demolition/clearance of existing site.

This Arboricultural Method Statement (AMS) demonstrates the protection measures for the retained trees and should be read in association with the Tree Protection Plan JFA0289.03A TPP appended at JF3. This report follows the initial tree survey, implications assessment and on-going discussions to minimise the impact upon the existing tree stock.

The emphasis of the report is predominantly that of preservation and tree protection. It identifies methodologies to provide protection for the retained trees, to ensure their safe and healthy retention during and post development, as guided by BS5837:2012 and current best practice.

A total of 26 (twenty-six) individual trees, 2 (two) groups of trees, sections of 2 (two) groups of trees, 1 (one) hedge and 1 (one) woodland will be retained within and adjacent to the site as detailed within this report. There are 7 (seven) Individual trees 1 (one) group of trees, sections of 2 (two) groups and 1 (one) hedge that will be removed to facilitate the proposed development.

8 (eight) 'U' Grade trees (Trees 21, 24, 27, 28, 30, 31, 32 and 38) located within the site will be removed regardless of any proposed design layouts.

The proposed landscaping plan by Deacon Design shows that approximately 30 (thirty) new trees will be planted on the site.

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SUPPORTING INFORMATION/APPENDICES:

JF1	Tree Survey Schedule
JF2	Tree Survey Plan JFA0289.01 TSP
JF3	Tree Retention Plan JFA0289.02 TRP
	Tree Protection Plan JFA0289.03A TPP
JF4	Pre-Commencement Tree Works Schedule

GUIDING PRINCIPLES/APPENDICES:

JF5	Tree Protection Guidance Leaflet
	Construction Exclusion Zone Site Notice
	Common Causes of Damage During Construction Works
JF6	Qualifications and Experience

1.0 INTRODUCTION

- 1.1 There is a proposed planning application for Moorhill, Moorhill Road, West End, Eastleigh, SO30 3AZ.
- 1.2 The proposal is for the construction of a 70-bed purpose-built care home (Use Class C2); associated access, parking, landscaping, sustainable drainage, electricity sub-station, other structures and works; following demolition/clearance of existing site.
- 1.3 James Fuller Arboriculture has been appointed by Highwood Homes Limited to carry out Arboricultural services in support of a full planning application for a new care home being made to Eastleigh Borough Council (EBC) at 'Moorhill', Moorhill Road, West End.

The proposed development seeks to provide specialist care accommodation in the form of a new 70-bed care home in attractive, landscaped surroundings.

The site is located contiguous with the existing settlement policy boundaries of West End and the city of Southampton, close to existing shops, services and facilities, with a large catchment population. The site is ideally located for the provision of a new care home to meet local needs.

- 1.4 This is an Ideal site for a care home in a sustainable, accessible location with a wide catchment population and identified needs

- High quality design and attractive landscaped grounds and gardens

The delivery of a new purpose-built care home at Moorhill will:

SOCIAL

- help meet the critical need for high quality specialist accommodation for older people in a sustainable and accessible location;
- contribute towards overall housing land supply in the borough;
- through residents' 'down-sizing', free up family- sized homes elsewhere and improve the efficiency of the wider housing market by offering increased housing choice for older people;
- reduce the burden on publicly funded care homes and health and care services locally;

ECONOMIC

- boost the local economy through the creation of circa 60 FTE jobs across a range of skill levels when operational plus those generated during the construction period;
- boost the local economy through increased local spend from residents, operators and through the wider supply chain;
- contribute towards financial receipts e.g. Council Tax receipts which will accrue to the Council as a result of the proposed development;

ENVIRONMENTAL

- bring back into beneficial use a previously developed site;
- make efficient use of a sustainable site that is close to local amenities and has good transport links;
- be well-designed and of a high quality, appropriate to its context in terms of form, materials and landscaping;

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- result in biodiversity net-gain, utilising sustainable drainage methods and an increased number of trees on the site;
 - built to BREEAM 'Excellent' sustainable construction standards;
- 1.5 Document disclosure provided:
- Existing Site Plan
 - Proposed Landscaping Scheme by Deacon Design (Ref DD560XR01)
- 1.6 The client provided the original site plans with tree locations, and these have been used as the basis for the production of subsequent plans. Whilst James Fuller Arboriculture has had a limited input in defining the contents of the development plan, it broadly conforms to the requirements of BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"* and current best practice advice.
- 1.7 Our advice has been sought on the principles of the proposed development in relation to the potential impact on the existing tree stock, to inform and to facilitate the proposed development from an arboricultural perspective.

2.0 CLIENT'S BRIEF

- 2.1 James Fuller Arboriculture has been appointed by Highwood Homes Limited to provide Arboricultural services in support of a full planning application for a new care home being made to Eastleigh Borough Council (EBC) at 'Moorhill', Moorhill Road, West End. The information has been compiled in accordance with BS5837:2012 and current best practice advice.
- To visit site and undertake a Tree Survey of all the existing trees on and adjacent to the site.
 - Produce a combined Tree Survey and Root Protection Area (RPA) schedule appended at JF1.
 - To produce a Tree Survey Plan (TSP) (Plan JFA0289.01 TSP appended at JF2).
 - To undertake an Arboricultural Implications Assessment (AIA) of the proposed development provided by the client to identify which trees can be retained, which will need to be removed and suggest mitigating build techniques in order to retain trees where feasible.
 - Based on the above and further on-going discussions, to provide an Arboricultural Method Statement (AMS) detailing the methodologies for the retention of the tree stock where feasible, in relation to the proposed design layout including a Tree Protection Plan JFA0289.03A TPP appended at JF3.
- 2.2 Amendments to this Method Statement may be required for construction purposes. All amendments will be assessed by the retained arboricultural consultant and approved in writing by Eastleigh Borough Council.

3.0 DESCRIPTION OF THE SITE

- 3.1 The site is located on the eastern side of Moorhill Road (A27) just to the south of the junction with Telegraph Road. The site is a previously developed site, that has since been demolished and is now unused. The site attracts fly tipping and anti-social behaviour.

- 3.2 **Photograph 1:** A view of the site from the southeast



4.0 THE TREE STOCK

- 4.1 A tree survey was undertaken by James Fuller of James Fuller Arboriculture on the 13th September 2021 that identified 41 (forty-one) individual trees, 5 (five) groups of trees, 2 (two) hedges and 1 (one) woodland. The combined Tree Survey and Root Protection Area (RPA) Schedule is appended at JF1 and Tree Survey Plan JFA0289.01 TSP is appended at JF2.

4.2 Tree Categorisation Method

Category U = Trees in such a condition that any value would be lost within 10 years, or should be removed for reasons of sound arboricultural management.

There were 10 (ten) 'U' grade trees on or adjacent to the site at the time of surveying (Trees 1, 5, 21, 24, 27, 28, 30, 31, 32 and 38).

Note: BS5837:2012 states -
“Category U trees are 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.”

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- Category A = Trees of high quality and value: in such a condition as to make a substantial contribution, (40 years or more is recommended). There were no individual 'A' grade trees on the site at the time of surveying.
- Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There were 14 (fourteen) individual 'B' grade trees, 1 (one) 'B' grade group of trees and 1 (one) 'B' grade woodland on or adjacent to the site at the time of surveying. (Trees 3, 4, 6, 8, 12, 13, 14, 18, 19, 20, 33, 34 and 39, Group 2 and Woodland 1).
- Category C = Trees of low quality and value which might remain for a minimum of 10 years or young trees with stems of less than 150mm diameter. There were 17 (seventeen) individual 'C' grade trees, 4 (four) 'C' grade groups of trees and 2 (two) 'C' grade hedges on or adjacent to the site at the time of surveying. (Trees 2, 7, 9, 10, 11, 15, 17, 22, 23, 25, 26, 29, 35, 36, 37, 40 and 41, Groups 1, 3, 4 and 5 and Hedges 1 and 2).

Note:

Trees under these categories are trees that should be a material consideration in the development process; the subcategories are intended to reflect arboricultural, landscape and cultural values respectively.

- 4.3 For more details of the existing tree stock, refer to the Tree Survey Schedule (appended at JF1).

5.0 TREE PRESERVATION ORDER/CONSERVATION AREA

- 5.1 Following consultation with Eastleigh Borough Council's website, James Fuller Arboriculture has been made aware that the site is not located within a Conservation Area.
- 5.2 James Fuller Arboriculture has been made aware that there is an existing Tree Preservation Order, which covers some of the existing trees on the site. It looks like the following trees are protected by the TPO, Trees 7-14 and 28-40. If any works are required to these trees prior to the granting of full planning consent or in excess of what is detailed within this report, then a Tree Works Application must be submitted to and approved by Eastleigh Borough Council.

6.0 PROPOSED TREE RETENTION AND TREE LOSS

- 6.1 As guided by BS5837:2012 Trees in relation to design, demolition and construction - recommendations, an experienced arboriculturist has assessed the requirements for tree protection and the Root Protection Area (RPA). The implications of the proposed development are detailed below, along with the measures to ensure the protection of the retained trees.

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- 6.2 As part of the assessment, dimensions have been scaled from the proposed design layout drawings (Ref DD560XR01) by Deacon Design, which have been prepared and modified, to include the relevant Tree Survey data and the tree protection information as shown on Plan JFA0289.03 TPP, appended at JF3.
- 6.3 A total of 26 (twenty-six) individual trees, 2 (two) groups of trees, sections of 2 (two) groups of trees, 1 (one) hedge and 1 (one) woodland will be retained within and adjacent to the site as detailed within this report.
- 6.4 There are 7 (seven) Individual trees 1 (one) group of trees, sections of 2 (two) groups and 1 (one) hedge that will be removed to facilitate the proposed development.
- 6.5 8 (eight) 'U' Grade trees (Trees 21, 24, 27, 28, 30, 31, 32 and 38) located within the site will be removed regardless of any proposed design layouts.
- 6.6 **Table 1: Tree Removals**

Tree Number	Tree Species	BS5837 Category
21	Sweet Chestnut	U
24	Sycamore	U
26	Sweet Chestnut	C
27	Common Holly	U
28	Sweet Chestnut	U
29	Sweet Chestnut	C
30	Sweet Chestnut	U
31	Sycamore	U
32	Common Holly	U
35	Common Holly	C
36	Lawson Cypress	C
37	Lawson Cypress	C
38	Western Red Cedar	U
39	Sweet Chestnut	B
40	Sweet Chestnut	C
Grp 1 (section)	Western Red Cedar, Beech, Holly, Laurel	C
Grp 3	Goat Willow, Sycamore	C

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Grp 5 (section)	Cherry Laurel, Cypress	C
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- 6.7 The proposed landscaping plan by Deacon Design shows that approximately 30 (thirty) new trees will be planted on the site.
- 6.8 The proposed landscaping scheme includes 30 (thirty) new trees. The 30 (thirty) new trees covers the following:
- 4 Trees will be used to mitigate the parking bays (requirement for 1 new tree per 6 parking bays)
 - 26 Trees will be used to mitigate the loss of the existing trees (15 Existing trees to be removed) The 26 new trees, provides more than the required number of replacement trees as guided by Eastleigh Borough Councils Tree Replacement Policy.
- 6.9 Trees 1 and 5 have been given a 'U' grade (trees with less than 10 years remaining contribution) and should be managed by the appropriate land owner.
- 6.10 Tree 2 is a large Pine tree located within the grass verge next to the highway on the western side of the site. *Phaeolus schweinitzii* fungal fruiting bodies were noted at the base of this tree during the tree survey. It is recommended that the land owner is made aware of this defect and the tree is then managed accordingly.

7.0 SUMMARY OF ARBORICULTURAL IMPLICATIONS

7.1 Tree Works

All the proposed tree works are detailed within the Tree Works Schedule (TWS) appended at JF4. The tree works shall be carried out as an initial phase of works, prior to any other works taking place on site. Once the tree works have been completed the Tree Protection Barriers shall be erected.

7.2 Tree Protection Barriers

Tree Protection Barriers shall be erected following the completion of the tree works. The barriers shall be constructed as detailed within section 11 of this report and positioned as specified on the Tree Protection Plan JFA0289.03A TPP appended at JF3.

Tree Protection for the site can be erected and then left in situ for the duration of the main site works. Tree Protection Barriers will need to be moved on site to allow for the construction of new parking bays and footpaths, but the barriers should only be moved as and when they need to be.

7.3 Construction Works

Site Entrance/Exit

The proposed site entrance/exit is located in the north west corner of the site. The location partly utilises the existing entrance but widens it to the north away from the Large off-site Pine (Tree 2). The new access will utilise part of the existing access, meaning that there will be no further excavations required within the RPA of Tree 2. The existing surface and sub base will be removed and replaced. A new kerb edge will be set out further from the existing tree and within the existing build up for the existing access. The area between the existing access and the edge of the new access will be back filled with a good quality top soil.

The area of the new access and proposed service route within the RPA of Tree 41 will be hand dug/Vac Ex under the supervision of the retained arboricultural consultant. The route will avoid the RPA of Tree 2 and Tree 34 to minimise the impact on these trees.

The access road route matches the existing hard standing within the site as it enters the RPA of Tree 34. The existing surface and sub base will be removed and replaced, but no further excavations within the RPA will be required.

Proposed Parking and Footpaths

There is proposed parking, footpaths and hard surfacing within the RPA's of Trees 2, 3, 8, 10, 13, 14, 16, 17, 18, 19, 23, 25, 33 and 34. The new hard standing will be of a 'No Dig' construction incorporating a load suspension system i.e. Cellweb. The 'No Dig' system shall be constructed as detailed in section 15 of this report. The Cellweb shall be installed in the areas identified on the Tree Protection Plan JFA0289.03A TPP appended at JF3.

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8.0 PRE-COMMENCEMENT SITE MEETING

- 8.1 It is recommended that a pre-commencement site meeting is held prior to any works commencing on site, to agree all approved processes with the arboricultural consultant and the construction personnel. This meeting could be used to formally agree the methods of work, position of site offices, material storage, compounds, parking and tree protection measures prior to commencement of the development and the associated clearance work.
- 8.2 **General Site Management:** It is the developer's/site manager's responsibility to ensure that the details of this arboricultural statement and any agreed amendments are known, understood and carried out by all site personnel.

9.0 ADDITIONAL ARBORICULTURAL ADVICE FOR SITE PERSONNEL

- 9.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet (appended at JF5) shall be issued to all staff at the time of their site induction. Spare copies of this leaflet shall be available in the site office as replacements.
- 9.2 In order to inform site personnel of the purpose of the barriers, information notices shall be fixed to the barriers at 5m intervals. These notices shall be weather proof and should be similar to the one provided at appendix JF5 and replaced as and when necessary.
- 9.3 There is a Common causes of Tree Damage leaflet attached at JF5, it is recommended that leaflet is handed out to all contractors to make them aware of the potential actions carried out on site that could damage any retained trees. It is hoped that making all site operatives aware of how a tree can be damaged that this might help avoid retained trees being accidentally damaged.

10.0 PRE-COMMENCEMENT TREE WORKS

- 10.1 All tree works are detailed within the Tree Works Schedule appended at JF4 and will be undertaken prior to the commencement of site preparation and construction works.
- 10.2 **All permitted or approved tree work** should be carried out in accordance with the British Standard "*Recommendations for Tree Work*" BS3998:2010, by suitably qualified and experienced professional Tree Surgeon. Under no circumstances shall site personnel undertake any tree pruning operations. All tree surgery works should be carried out prior to the commencement of any site works, and erection of protective barriers.
- 10.3 Consideration should be given to the timing of the proposed tree works to avoid the active growing period of trees. Therefore, all tree work should ideally be carried out

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during the dormant period from November through to February and then again from June to August.

- 10.4 Due to the official bird nesting season considered to be from 1st March through to the 31st July (Natural England) depending on weather conditions, consideration must also be given to the potential for nesting birds. Therefore if tree work is to be carried out within June, July or August the project ecologist must be consulted to:

- Complete or advise on a pre-works survey which needs to be carried out by a suitably competent person. As a general rule, it should be assumed that birds will be nesting in trees, and it is down to contractors to assess, record and confirm that any works carried out in the management of trees and other vegetation has not disturbed actively nesting birds*.

- 10.5 Should additional tree works become apparent during the construction process; written consent will be required from Eastleigh Borough Council prior to these additional works being undertaken.

11.0 TREE PROTECTION MEASURES

11.1 *Tree Protection*

Before starting works on site tree protection will be installed in accordance with Tree Protection Plan JFA0289.03A TPP (appended at JF3). This will occur immediately following the completion of tree works and prior to any site preparation works starting.

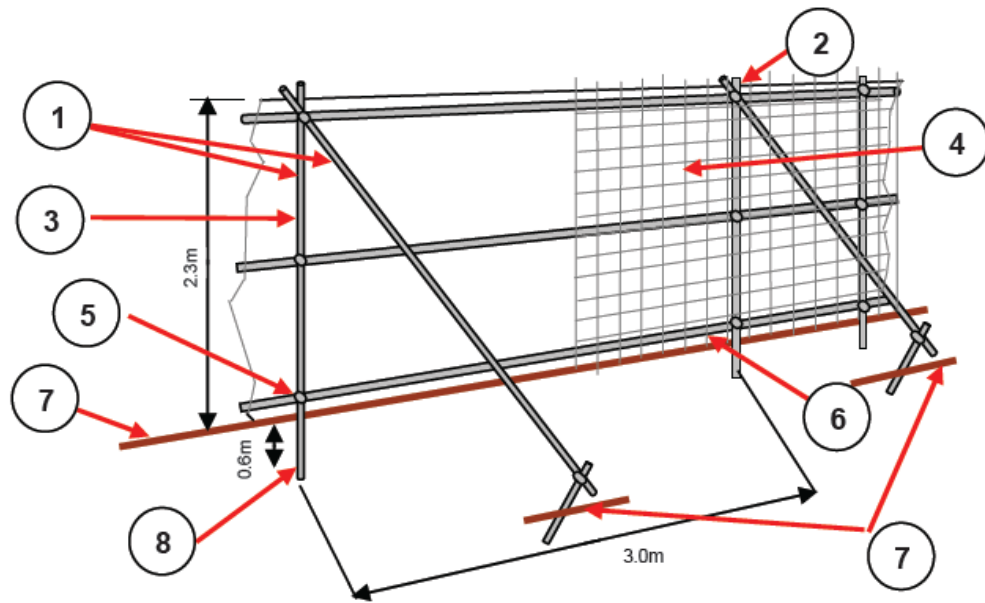
It is recommended that a copy of the Tree Protection Plan is made available to act as a point of reference for all contractors.

11.2 *Tree Protective Barrier*

Trees 1-20, 22, 23, 25, 33, 34 and 41, Groups 1, 4 and 5, Hedge 1 and Woodland 1 are adjacent to areas of significant construction activity and will be protected by installing either the following protective barrier in the locations specified on the Tree Protection Plan JFA0289.03A TPP appended at JF3 or site hoarding.

The barrier is to comprise of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps.

Figure 1: Protective Barrier



Example of protective barrier:

1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Weldmesh wired to the uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of barriers to avoid easy dismantling
7. Ground level
8. Approximately 0.6m driven into the ground



Once the barriers are in place they must remain *in-situ* throughout the following:

- Contractor occupancy
- Plant and Materials delivery
- Construction works
- Installation of porous surfacing
- Utility installation
- Completion of development
- Landscaping

The area within the Tree Protection Barriers shall be known as the Construction Exclusion Zone (CEZ) and will be regarded as **sacrosanct**. The tree protective barriers shall not be taken down or relocated at any time without the written approval of East Hampshire District Council. An example of a CEZ notice is appended at JF5.

12.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

- 12.1 Care shall be taken when planning site operations, to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact could result in serious damage to them, and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees, will be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

13.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

- 13.1 It is anticipated that all storage of materials and deliveries shall make use of the existing access and hard surfaces within the site confines, in order to avoid unnecessary damage to tree roots.

- 13.2 The locations for the delivery, storage and movement of all essential facilities, as well as aspects such as temporary contractor vehicle parking and site location of chemical mixing (e.g. concrete, will be outside of the RPAs, and avoid areas where harmful chemicals may flow downhill into the RPAs of retained trees.

13.3 Site Huts

All site huts (if required) that are to be situated on ground that is not existing hard surfacing, shall have appropriate footings or be situated on a temporary surface, which will aid in reducing the potential for compaction of the ground, where they are in close proximity to the existing tree protective barrier line. Site huts can be used as part of the protective barrier boundary, and in some cases, can be beneficial where installation does not conflict with the aerial parts of the tree.

13.4 Material Storage

This shall be accommodated outside of the CEZ, particularly to avoid harmful spillages of fuel, or phytotoxic substances that may damage the health of retained trees.

14.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CEZ

- 14.1 Inside the CEZ formed by the protective barrier, the following prohibitions shall apply:
- No construction activity will occur within the CEZ unless otherwise stated in this report, or agreed in writing with East Hampshire District Council prior to the specific activity taking place.
- 14.2 In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:

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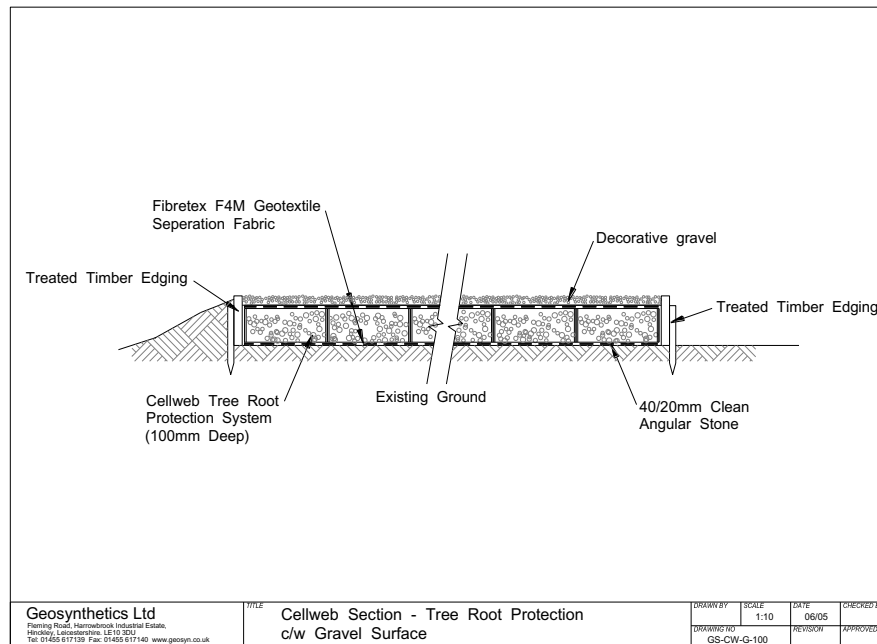
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- Materials/liquids, which are harmful to trees and have the ability to contaminate the soil e.g. concrete mixing, diesel, oil and vehicle washings, shall not be discharged within 10 metres of the tree stem, branches, foliage or RPA. This should take into consideration the topography of the site, to avoid materials/liquids such as concrete washings running downhill towards any retained trees.
- Fires shall not be lit in a position where their flames can extend to within 10 metres of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, telephone cables or other services shall not be attached to any part of the tree. (See appendix JF5 Common Causes of Damage During Construction Works)
- Any new services should not be installed in close proximity to retained trees unless detailed within this report.

15.0 ‘NO DIG’ HARD SURFACE

- 15.1 Plan JFA0289.03A TPP appended at JF3 indicates where no-dig hard surfaces are to be installed within the RPA's of retained trees. The 'No Dig' hard surface shall be created from Geosynthetics Cellular Confinement system, Cellweb or similar product.
- 15.2 The 'No Dig' hard surface shall be installed in accordance with the manufacturers method statement. New surfacing is proposed within the RPA's of existing retained trees, which has the potential to cause harm if not specified and implemented with care.
- 15.3 I am confident that the proposed 'No Dig' hard surface can be installed without causing significant harm to the existing trees. This surface solution is within the recommendations set out in BS5837:2012 and would be appropriate in this situation.

15.4 **Figure 2:** Cross section of 'No Dig' hard surface



15.5 **Introduction**

This guidance describes the procedure required to undertake the installation of hard surfacing, i.e. footpath, whilst exerting no adverse effects on the roots of trees to be retained. It is essential to maintain adequate supplies of water and oxygen for trees through the soil. Porosity is important, particularly where the new hard surface covers an area of previously unmade ground, under which tree roots may have developed. Where hard surfacing passes beneath the tree's canopy, or where it encroaches upon the Construction Exclusion Zone (CEZ) of retained trees, a porous 'no dig' method of construction will be required. The construction has been engineer designed and consists of a non-clogging gas and water permeable surface and sub-base. This will incorporate a three-dimensional cellular confinement system to prevent future rutting and underlying ground compaction.

The Tree Protection Plan JFA0289.03A TPP (appended at JF3) outlines areas where hard surfacing will be installed using a 'no-dig' specification.

15.6 **Method of working**

Responsibilities:

- The Site Supervisor shall be responsible for the overall implementation of this Method Statement
- The Site Supervisor shall be responsible for ensuring the work area has been CAT scanned, and services identified on the ground by a responsible person using equipment within calibration. All relevant service drawings will be checked,

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and any necessary trial holes will be excavated, but only under arboricultural on site supervision.

- James Fuller Arboriculture have assessed the increase in levels and do not believe that it will have a detrimental impact on the retained trees.
- Under no circumstances, shall there be a decrease in levels through excavation within the Root Protection Areas of the trees.
- The Site Supervisor shall be responsible for the safe handling and distribution of materials around the site.
- The Site Supervisor shall be responsible for providing a completed Quality Assurance document at the conclusion of the scheme.

Materials:

- PPE as required by the Site Supervisor
- Cellular confinement system
- Stapler and staples
- Staking pins
- Separation geotextile membrane
- Edge restraints
- **Infill aggregate (angular granular 40-20mm no fines)**
- Wearing course - Hard core for duration of use and then removed.

15.7 Method of Preparation

The Site Supervisor will set out the exact location of the area to receive the new surfacing.

Following the CAT scan, the site supervisor will direct the implementation of the hard surfacing as per the following details.

The Site Supervisor shall ensure the prepared surface meets the necessary strength requirements prior to following works.

The Site Supervisor shall provide the setting out of any edging requirements.

15.8 Preparation of the surface for the cellular confinement system

The soil surface will not be skimmed to establish new surfaces at the former ground level, as this has the potential to cause root damage. Therefore, loose organic matter and/or turf will be removed carefully using hand tools, and the new surface established above the former ground level, using a granular fill where required.

The ground levels are to be raised within the Root Protection Area (RPA). This will be achieved by the use of a granular material, which does not inhibit vertical gaseous diffusion. Examples of suitable granular materials include, no-fines gravel, washed aggregate, or cobbles.

No-fines granular materials should be used wherever fill or a sub-base is required, to ensure adequate gaseous diffusion.

to avoid Excess water in the Root Protection Area a permeable surface has been chosen.

15.9 Edge Supports

Timber edge – 50mm x 50mm tanalised timber stakes shall be hammered into the ground along the setting out line, at 900mm centres and at changes in direction. The finished level of the stakes shall be 25mm below the finished level of the edging timbers. Tanalised 25mm x 125mm timber rails shall be fixed across the stakes with appropriate fixings. The finished top of timber level shall be approximately 25mm lower than the adjacent finished ground level.

15.10 Construction

Lay geotextile membrane over prepared surface between edgings, ensuring overlaps of 300mm minimum. Temporarily retain geotextile with either stakes or weights.

Expand the cellular confinement system over the geotextile and anchor open with pins during infilling.

The expanded cellular confinement system panels shall be in-filled with the appropriate aggregate by hand, under the direction of the site supervisor. The cellular confinement system shall be overfilled by 50mm, to create a surcharge over the product, which protects the leading edges of the cells.

The infill aggregate shall be rolled or whacked to ensure cohesion of components.

15.11 Finishes

The Site Supervisor shall conduct a visual inspection of the finished surface structure prior to the application of any wearing course.

15.12 Signing off

The Site Supervisor shall ensure that all waste material is removed from site.

The arboriculturist shall also sign off the works if present throughout the process to oversee the implementation.

16.0 CONCLUSIONS

16.1 The proposal for the construction of a 70-bed purpose-built care home (Use Class C2); associated access, parking, landscaping, sustainable drainage, electricity sub-station, other structures and works; following demolition/clearance of existing site has been assessed broadly in accordance with BS5837:2012 *“Trees in Relation to Design, Demolition and Construction – Recommendations”*.

16.2 It is my opinion that the trees identified for retention can be afforded due respect and provided adequate protection, ensuring their safe and healthy retention during the development process.

PART 2

ARBORICULTURAL/CONSTRUCTION METHOD STATEMENTS

- 16.3 A total of 26 (twenty-six) individual trees, 2 (two) groups of trees, sections of 2 (two) groups of trees, 1 (one) hedge and 1 (one) woodland will be retained within and adjacent to the site as detailed within this report. There are 7 (seven) Individual trees 1 (one) group of trees, sections of 2 (two) groups and 1 (one) hedge that will be removed to facilitate the proposed development. 8 (eight) 'U' Grade trees (Trees 21, 24, 27, 28, 30, 31, 32 and 38) located within the site will be removed regardless of any proposed design layouts.
- 16.4 The proposed landscaping plan by Deacon Design shows that approximately 30 (thirty) new trees will be planted on the site. The new planting will have a positive impact on the site and the local area.
- 16.5 Provided the recommendations included within this report are strictly adhered to, James Fuller Arboriculture believes the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

17.0 CONTACT LIST

- 17.1 It is suggested that points of contact and lines of communication are established prior to commencement of the works on site including:-
- Arboricultural Consultant – James Fuller
 - Project Architect
 - Highways Engineer
 - Structural Engineer
 - Drainage Engineer
 - Landscape Architects
 - East Hampshire District Council's Tree Officer
 - East Hampshire District Council's Planning Case Officer
 - Site Supervisor and Foreman
- 17.2 It is advised that the site supervisor establishes their own listing of contact details at the pre-start site meeting, and displays this in their office for general use as necessary.

18.0 BIBLIOGRAPHY

- British Standard 5837:2012 –
"Trees in Relation to Design, Demolition and Construction - Recommendations"
- British Standard 3998:2010 –
"Recommendations for Tree Work"
- National Joint Utilities Group Publication Volume 4 –
"Guidelines for the planning, installation and maintenance of utility services in proximity to trees"
- Wildlife and Countryside Act 1981
- Conservation of Habitats and Species Regulations 2010 (as amended)
- Town and Country Planning Acts

TREE SURVEY NOTES

This Tree Survey has been undertaken in accordance with the recommendations set out in British Standard 5837:2012 and current arboricultural best practice.

- Each tree has been numbered sequentially and recorded on the Tree Survey Plan.
- Due to variations of existing ground levels through the site, height dimensions are estimated and are given in metres. Accurate heights, measured with the aid of optical instruments can be provided where instructed.
- Trunk/stem diameters are measured in millimetres (mm) at 1.5 metres above ground level, using a diameter measuring tape, unless otherwise stated.
- Estimated branch spread is taken in metres from the centre of the trunk, at the four cardinal points of a compass, to achieve an accurate representation of the crown shape which is recorded on the tree survey plan.
- An assessment of a tree's age classification is made in terms of its maturity within the site's landscape and defined as:

Y	=	young trees
SM	=	semi-mature trees
EM	=	early mature trees
M	=	mature trees
OM	=	over-mature trees

- An assessment of a tree's physiological condition is defined as:

Good	=	fully functioning biological system showing average vitality i.e. normal bud growth, leaf size, crown density and wound closure
Fair	=	fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure

Poor = a biological system with limited functionality showing significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure

Dead = dead

➤ An assessment of a tree's structural condition is defined as:

Good = no significant structural defects

Fair = structural defects which could be alleviated through remedial tree surgery or management practices

Poor = structural defects which cannot be alleviated through tree surgery or management practices

Dead = dead

➤ An assessment of a tree's future life expectancy is defined as: **<10, 10+, 20+ or 40+ years.**

Categorisation of Trees

The category for each tree is assessed in accordance with the recommendations of BS5837:2012. The assessment has not considered any site-specific development proposals, but will have considered any changes on or off-site which may have an effect on the conditions surrounding the surveyed trees.

The trees have been classified into one of the following categories (and one or more sub-categories [this will not increase the value of the tree]) and are indicated on the associated drawings by colours as indicated.

Category U		Identification colour on plan		
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	• 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 other 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			RED
Category A	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
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 of woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands, of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN

Category B	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
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 down-graded because of impaired condition (e.g. presence of significant through 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 value or other cultural value	MID BLUE
Category C	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	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

Clients are advised that Tree Surveys are a basic data collection exercise and record of tree condition at the time of survey. It will identify any visible signs of ill-health or major defects, advising a further detailed investigation where appropriate. This will most often take the form of a request for either “*full ground level inspection*” or “*climbing inspection required*”. There may also be a further reference to the need for “*decay detection equipment*” to aid diagnosis. A tree survey does not include a comprehensive schedule or specification of remedial tree works, but may contain a guide to the work which might be undertaken by a prudent tree owner, purely for reasons of health and safety.

A Tree Survey should not be confused with a Tree Inspection or Arboricultural Implication Assessment, which are totally separate exercises.

	BS5837 – Tree Survey			
	Client:	Highwood Homes Ltd	Site:	Moorhill, Morrhill Road, West End
	Date:	13 th September 2021	Consultant:	James Fuller FdSc Arb, BTEC Nat.Dip Forestry & Arb, M.Arbor.A
	Tagged:	No	Weather:	Overcast

Notes:-

1. It may be advised that some trees should have the ivy removed to enable a re-survey to be carried out. This would also alleviate the tree from becoming suppressed; carrying additional weight that increases the chance of windthrow due to a larger dense crown area; and only receiving restricted light. Unless otherwise stated, in order to prevent regrowth, it is only necessary to remove a 300mm section of ivy and clear around the base.
2. It may be advised that it was only possible to estimate the diameter of some trees because of ivy smothering, dense vegetation, or trees located off-site with no access.
3. The estimated remaining contribution in years, and the tree grading category have been calculated for the current situation and may alter where further investigation works are advised.
4. Some trees or groups may have been given an interim grade. The reason for the interim grading is addressed in the timescales given as this may have a bearing on health and safety and/or any development proposals.
5. Tree Groups have been assessed with estimated and representative data.
6. This is not a Tree Works Schedule. Any preliminary management recommendations are listed in the interests of health and safety and should be carried out by a prudent tree owner.
7. Any management recommendations are suggested for reasons of health and safety only, regardless of development proposals at this stage. However, the defects requiring remedial tree surgery are by their very nature potential wildlife habitats, including protected species, which needs consideration prior to any tree surgery works commencing.
8. Any tree numbers that are followed by a * are indicatively plotted and their locations should be verified on site by a land surveyor.
9. Tree data colours: -
 - U Grade Trees Highlighted in RED
 - A Grade Trees Highlighted in Green
 - B Grade Trees Highlighted in Blue
 - C Grade Trees Highlighted in Grey

James Fuller Arboriculture has checked Eastleigh Borough Councils website and has been informed that the site is not located within a Conservation Area. James Fuller Arboriculture has checked Eastleigh Borough Councils website and has been informed that the site is protected by an Area Tree Preservation Order, Trees 7-14, 16-26 and 28-40 are included.

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
1	Western Red Cedar <i>Thuja plicata</i>	10	S	420	-	-	N 4.5 E 3 S 1 W 3.5	N 1.7 E 2 S 3 W 1.8	Semi-mature	Poor	Structural Condition - Fair Apical dieback, Crown shape distorted due to group pressure, Offsite tree Bark wounds at base, Bark Wounds on trunk, Large bark wound on southwest side from ground level to top of tree, Deadwood in crown, Suppressed by T2	Advise removal	<10	U
2	Monterey Pine <i>Pinus radiata</i>	22	S	1390	707	15	N 12 E 9 S 12 W 9	N 3 E 4 S 4 W 4	Mature	Good	Structural Condition - Fair Off site tree, Exposed surface roots, Mechanical damage, Major deadwood in crown, Old pruning wounds, Offsite tree <i>Phaeolus schweinitzii</i> fungal fruiting bodies on roots at base on west side (at base, 1m from base and 2.5m from base, Historic branch failure, Tree located next to road, Fungal fruitng bodies located between tree and road	Inform owner of duty of care	10+	C1 Interim
3	Pedunculate Oak <i>Quercus robur</i>	18	S	790	282	9.5	N 12 E 6 S 11 W 11	N 1.5 E 3 S 1.5 W 1	Early Mature	Fair	Structural Condition - Good Crown shape distorted, Minor deadwood in crown, Low hanging branches, Offsite tree Wound on branch over road, Thinning upper crown	Inform owner of duty of care Remove damaged branch and crown lift to 4.5m	20+	B1 Interim

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
4	Field Maple <i>Acer campestre</i>	10	S	490	109	5.9	N 5 E 6 S 6 W 8	N 1.5 E 1 S 1.5 W 1.5	Early Mature	Good	Structural Condition - Good Crown shape distorted due to group pressure, Minor deadwood in crown, Low hanging branches	None required at time of survey	20+	B1+2
5	Narrowleaf Ash <i>Fraxinus angustifolia</i>	18	S	660	-	-	N 8 E 5 S 9 W 9	N 2 E 1 S 1 W 1	Mature	Fair	Structural Condition - Poor Crown shape distorted due to group pressure Old pruning wound on trunk with decay, Branches previously failed from crown, Branches vulnerable to failure, Heavily weighted branches growing towards road	Advise removal	<10	U
6	Turkey Oak <i>Quercus cerris</i>	16	S	620	174	7.4	N 4 E 5 S 10 W 9	N 4 E 4 S 1.8 W 1.8	Early Mature	Fair	Structural Condition - Fair Bifurcated at 1.7m, Black exudate on stem to west side, Heavily weighted branches in crown, Minor deadwood in crown,	Reduce stem on west side	20+	B1+2
7* TPO	Pedunculate Oak <i>Quercus robur</i>	12	S	280	35	3.4	N 2 E 4 S 2 W 4	N 6 E 6 S 6 W 6	Semi-mature	Fair	Structural Condition - Fair Crown shape distorted due to group pressure Tall and etiolated, Suppressed by larger trees	None required at time of survey	10+	C1+2
8 TPO	Pedunculate Oak <i>Quercus robur</i>	18	MS	350 650	247	8.9	N 11 E 5 S 12 W 6	N 4 E 8 S 4 W 4	Early Mature	Fair	Structural Condition - Fair Bifurcated at ground level, Crown shape distorted due to group pressure, Major deadwood in crown	Remove major deadwood	20+	B1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
9 TPO	Silver Birch <i>Betula pendula</i>	12	S	170	13	2.0	N 5 E 3 S 0 W 2	N 3 E 3 S 0 W 4	Semi-mature	Good	Structural Condition - Fair Self set tree, Growing from base of old stump, Lean to north	None required at time of survey	10+	C1
10 TPO	Monterey Pine <i>Pinus radiata</i>	14	S	260	31	3.1	N 2 E 4 S 1 W 2	N 3 E 3 S 6 W 6	Semi-mature	Good	Structural Condition - Fair Minor deadwood in crown Self set tree, Growing from base of old stump,	None required at time of survey	20+	C1+2
11 TPO	Sweet Chestnut <i>Castanea sativa</i>	12	S	320	46	3.8	N 5 E 3 S 1 W 3	N 3 E 5 S 5 W 2	Semi-mature	Good	Structural Condition - Fair Basal suckers, Crown shape distorted due to group pressure Suppressed by larger trees	None required at time of survey	20+	C1+2
12 TPO	Common Beech <i>Fagus sylvatica</i>	18	S	450	92	5.4	N 4 E 5 S 7 W 7	N 1.5 E 2 S 0.5 W 2	Early Mature	Good	Structural Condition - Fair Trunk and crown shape distorted, Low hanging branches	None required at time of survey	20+	B1+2
13 TPO	Pedunculate Oak <i>Quercus robur</i>	18	S	590	157	7.1	N 9 E 4 S 7 W 6	N 6 E 5 S 6 W 6	Early Mature	Good	Structural Condition - Good Crown shape distorted due to group pressure, Part of linear group Bark wounds on trunk, Wildlife hole in trunk on north side at 4m, Bark wound on upper side of branch	Climbing inspection	20+	B1+2 Interim

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m ²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
14 TPO	Pedunculate Oak <i>Quercus robur</i>	20	MS	770 830	580	13.6	N 10 E 6 S 12 W 7	N 4 E 3 S 4 W 5	Early Mature	Fair	Structural Condition - Fair Bifurcated at ground level, Major deadwood in crown, Part of linear group Reaction wood present around Bifurcated union,	None required at time of survey	20+	B1+2
15	Pedunculate Oak <i>Quercus robur</i>	18	S	690	215	8.3	N 0 E 8 S 11 W 7	N 0 E 1 S 1 W 3	Early Mature	Fair	Structural Condition - Fair Crown shape distorted due to group pressure, Major deadwood in crown, Low hanging branches Crown shape biased to south, Epicormics in crown,	None required at time of survey	20+	C1+2
16 TPO	Pedunculate Oak <i>Quercus robur</i>	19	S	840	319	10.1	N 9 E 5 S 11 W 6	N 4 E 6 S 1.8 W 6	Early Mature	Good	Structural Condition - Good Part of linear group, Crown shape distorted due to group pressure, Major deadwood in crown	None required at time of survey	20+	B1+2
17 TPO	Sycamore <i>Acer pseudoplatanus</i>	17	MS	400 400	145	6.8	N 6 E 3 S 8 W 4	N 3 E 6 S 2 W 3	Early Mature	Good	Structural Condition - Fair Bifurcated at ground level, Part of linear group Stem and crown shape distorted,	None required at time of survey	20+	C1+2
18 TPO	Common Beech <i>Fagus sylvatica</i>	19	S	640	185	7.7	N 7 E 4 S 8 W 4	N 4 E 4 S 6 W 5	Early Mature	Good	Structural Condition - Fair Part of linear group, Bark wound, Crown shape distorted due to group pressure Dead ivy on trunk, Bifurcated at 4m,	None required at time of survey	20+	B1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
19 TPO	Common Beech <i>Fagus sylvatica</i>	20	S	760	261	9.1	N 9 E 6 S 10 W 4	N 3 E 2 S 1.5 W 4	Early Mature	Good	Structural Condition - Good Part of linear group, Crown shape distorted due to group pressure, Minor deadwood in crown, Low hanging branches	None required at time of survey	20+	B1+2
20 TPO	Pedunculate Oak <i>Quercus robur</i>	18	S	730	241	8.8	N 5 E 7 S 10 W 3	N 1.5 E 2 S 2 W 2	Early Mature	Good	Structural Condition - Fair Part of linear group, Crown shape distorted due to group pressure, Minor deadwood in crown Crown biased to south	None required at time of survey	20+	B1+2
21 TPO	Sweet Chestnut <i>Castanea sativa</i>	17	MS	700 650	-	-	N 6 E 4 S 6 W 5	N 3 E 3 S 3 W 3	Early Mature	Poor	Structural Condition - Fair Major deadwood in crown, Low crown density, In decline Bark necrosis at base on north side, Desiccated fungal fruiting bodies at base on north side, Bifurcated at 1.5m, Wildlife holes in trunk,	Advise removal	<10	U
22 TPO	Pedunculate Oak <i>Quercus robur</i>	12	S	390	69	4.7	N 3 E 5 S 6 W 4	N 3 E 3 S 2 W 4	Early Mature	Good	Structural Condition - Fair Boundary line tree, Crown shape distorted due to group pressure, Minor deadwood in crown Tree rubbing on fence	None required at time of survey	20+	C1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m ²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
23 TPO	Sycamore <i>Acer pseudoplatanus</i>	17	S	510	118	6.1	N 3 E 4 S 7 W 7	N 8 E 2 S 2 W 2	Early Mature	Good	Structural Condition - Fair Crown shape distorted due to group pressure Wildlife hole in trunk on south side at 2m, Bifurcated at 5m,	None required at time of survey	10+	C1+2
24 TPO	Sycamore <i>Acer pseudoplatanus</i>	18	S	610	-	-	N 6 E 5 S 6 W 3	N 3 E 2 S 2 W 8	Early Mature	Fair	Structural Condition - Poor Large Decaying cavity at base on east side, Bifurcated at 2m, Cavity in stem to south at 5m	Advise removal	<10	U
25 TPO	Common Lime <i>Tilia europaea</i>	22	MS	510 480 530	349	10.5	N 9 E 12 S 10 W 9	N 3 E 1 S 1 W 2	Mature	Good	Structural Condition - Poor Trifurcated at ground level, Low hanging branches Decay at base of central stem on west side, North side stem is heavily weighted and leans to north east side, South side stem Bifurcated at 5m	None required at time of survey	10+	C1+2
26 TPO	Sweet Chestnut <i>Castanea sativa</i>	12	S	800	290	9.6	N 6 E 4 S 2 W 4	N 1 E 1 S 1 W 1	Early Mature	Fair	Structural Condition - Fair Epicormics on trunk and in crown, Crown shape distorted due to group pressure, Minor deadwood in crown	None required at time of survey	10+	C1+2
27	Common Holly <i>Ilex aquifolium</i>	6	MS	90	-	-	N 2 E 2 S 2 W 2	N 2 E 2 S 2 W 2	Semi-mature	Fair	Structural Condition - Fair Multi stemmed at ground level, Apical dieback	Advise removal	<10	U

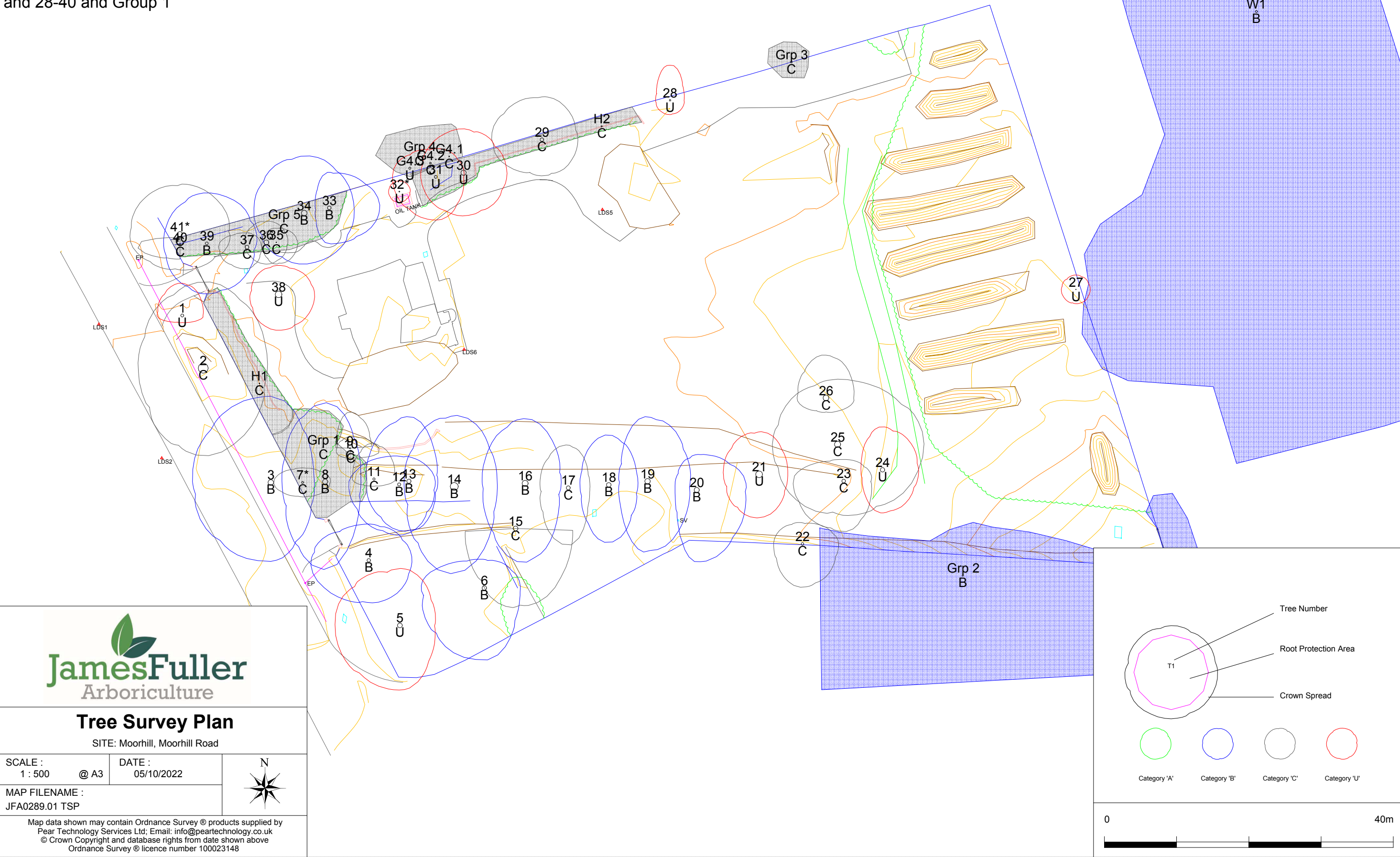
Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
28 TPO	Sweet Chestnut <i>Castanea sativa</i>	6	S	200	-	-	N 5 E 2 S 2 W 2	N 2 E 2 S 2 W 2	Dead	Dead	Structural Condition - Poor Basal suckers Dead tree,	Advise removal	<10	U
29 TPO	Sweet Chestnut <i>Castanea sativa</i>	10	MS	210 220 200 100 350	120	6.2	N 6 E 5 S 5 W 7	N 1 E 1 S 1 W 1	Early Mature	Good	Structural Condition - Fair Multi stemmed at ground level Large bark wounds on stems,	None required at time of survey	10+	C1
30 TPO	Sweet Chestnut <i>Castanea sativa</i>	16	MS	400 400 350 300 200	-	-	N 6 E 6 S 6 W 6	N 6 E 3 S 3 W 4	Dead	Dead	Structural Condition - Poor Dead tree	Advise removal	<10	U
31 TPO	Sycamore <i>Acer pseudoplatanus</i>	14	S	400	-	-	N 4 E 4 S 6 W 6	N 2 E 2 S 2 W 2	Early Mature	Poor	Structural Condition - Poor Apical dieback Decaying cavity at base, Bark necrosis on trunk,	Advise removal	<10	U
32* TPO	Common Holly <i>Ilex aquifolium</i>	6	S	140	-	-	N 1.5 E 1.5 S 1.5 W 1.5	N 1 E 1 S 1 W 1	Semi-mature	Poor	Structural Condition - Poor In decline	Advise removal	<10	U
33 TPO	Sweet Chestnut <i>Castanea sativa</i>	14	S	500	113	6.0	N 5 E 7 S 5 W 2	N 2 E 3 S 1.5 W 2	Early Mature	Good	Structural Condition - Good Trunk and crown shape distorted, Low hanging branches	None required at time of survey	20+	B1+2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
34 TPO	Sweet Chestnut <i>Castanea sativa</i>	19	S	810	297	9.7	N 8 E 7 S 7 W 7	N 2 E 3 S 2 W 2	Early Mature	Good	Structural Condition - Fair Bark wound, Minor deadwood in crown	None required at time of survey	20+	B1+2
35 TPO	Common Holly <i>Ilex aquifolium</i>	4	MS	75	15	2.2	N 2 E 3 S 3 W 2	N 1 E 1 S 1 W 1	Semi-mature	Fair	Structural Condition - Fair Multi stemmed at ground level Decay in stems, Low crown density	None required at time of survey	10+	C1+2
36 TPO	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	20	S	690	215	8.3	N 3 E 3 S 3 W 3	N 5 E 5 S 5 W 5	Early Mature	Good	Structural Condition - Fair Minor deadwood in crown Bifurcated at 10m,	None required at time of survey	10+	C1+2
37 TPO	Lawson Cypress <i>Chamaecyparis lawsoniana</i>	16	MS	300 300 300 200	140	6.7	N 2 E 2 S 3 W 4	N 5 E 2 S 2 W 2	Early Mature	Good	Structural Condition - Fair Crown shape distorted, Minor deadwood in crown Multi-stemmed at 1.4m,	None required at time of survey	10+	C1+2
38 TPO	Western Red Cedar <i>Thuja plicata</i>	18	MS	380 450 710	-	-	N 4 E 5 S 5 W 4	N 2 E 2 S 2 W 3	Early Mature	Fair	Structural Condition - Poor Multi stemmed at ground level, Bark wound, Low crown density Stem to south has large split just below Bifurcated union,	Advise removal	<10	U
39 TPO	Sweet Chestnut <i>Castanea sativa</i>	19	MS	400	434	11.8	N 7 E 7 S 7 W 6	N 2 E 2 S 2 W 2	Early Mature	Good	Structural Condition - Fair Multi stemmed at ground level, Minor deadwood in crown Unable to Fully survey base due to dense vegetation,	Clear around base and resurvey within 1 month	20+	B1+2 Interim

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
40 TPO	Sweet Chestnut <i>Castanea sativa</i>	8	S	250	28	3.0	N 1 E 0 S 2 W 6	N 2 E 0 S 2 W 0.5	Semi-mature	Fair	Structural Condition - Fair Trunk and crown shape distorted Suppressed by larger trees	None required at time of survey	20+	C1+2
41*	Sweet Chestnut <i>Castanea sativa</i>	19	S	700	222	8.4	N 7 E 7 S 5 W 7	N 4 E 4 S 4 W 2	Early Mature	Fair	Structural Condition - Fair Offsite tree, Unable to verify health and safety due to no access, Estimated data, Low crown density	Inform owner of duty of care	10+	C1+2 Interim
Grp 1 TPO	Western Red Cedar, Beech, Holly, Laurel	3	S	150	10	1.8	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Mixed species, Understorey to larger trees	None required at time of survey	20+	C2
Grp 2	Oak, Beech, Sycamore, Goat Willow	10	S	200	18	2.4	N - E - S - W -	N - E - S - W -	Semi-mature	Good	Structural Condition - Good Off site group, Mixed species, Low hanging branches overhanging site	None required at time of survey	40+	B2
Grp 3	Goat Willow, Sycamore	5	S	250	28	3.0	N - E - S - W -	N - E - S - W -	Semi-mature	Good	Structural Condition - Fair Self set trees, Boundary edge group, Sycamore is off site,	None required at time of survey	10+	C2
Grp 4	Holly, Beech, Field Maple	12	S	0	0	0.0	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Unable to verify health and safety due to no access, Estimated data Off site group,	None required at time of survey	10+	C2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physiological Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
G4.1	Common Holly <i>Ilex aquifolium</i>		S	140	9	1.7	N - E - S - W -	N - E - S - W -	Young		Structural Condition - Off site tree, Trunk and crown shape distorted	None required at time of survey	10+	C1+2
G4.2	Common Beech <i>Fagus sylvatica</i>		S	250	28	3.0	N - E - S - W -	N - E - S - W -	Semi-mature		Structural Condition - Off site tree, Trunk and crown shape distorted	None required at time of survey	10+	C1+2
G4.3	Field Maple <i>Acer campestre</i>		S	300	-	-	N - E - S - W -	N - E - S - W -	Early Mature		Structural Condition - Off site tree, Bark necrosis on trunk, Trunk and crown shape distorted	Advise removal – Inform owner of Duty of Care	<10	U
Grp 5	Cherry Laurel, Cypress	2.5	S	100	5	1.2	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Understorey group to larger trees, Scrubby group	None required at time of survey	10+	C2
H1	Cherry Laurel	2	S	100	5	1.2	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Boundary edge hedge, Poor quality hedge	None required at time of survey	10+	C2
H2	Cherry Laurel	2	S	150	10	1.8	N - E - S - W -	N - E - S - W -	Semi-mature	Good	Structural Condition - Good Boundary edge hedge,	None required at time of survey	10+	C2
W1	Scots Pine, Birch, Sweet Chestnut, Goat Willow	17	S	300	41	3.6	N - E - S - W -	N - E - S - W -	Semi-mature	Good	Structural Condition - Good Off site Woodland, Mainly Scots pine with other species encroaching,	None required at time of survey	40+	B2

NOTES:
1. The site is not located within a Conservation Area.
2. There is an Area Tree Preservation Order (TPO), which protects Trees 7-14, 16-26 and 28-40 and Group 1



Tree Survey Plan

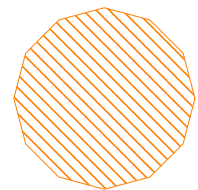
SITE: Moorhill, Moorhill Road

SCALE : 1 : 500 @ A3 DATE : 05/10/2022

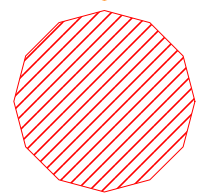
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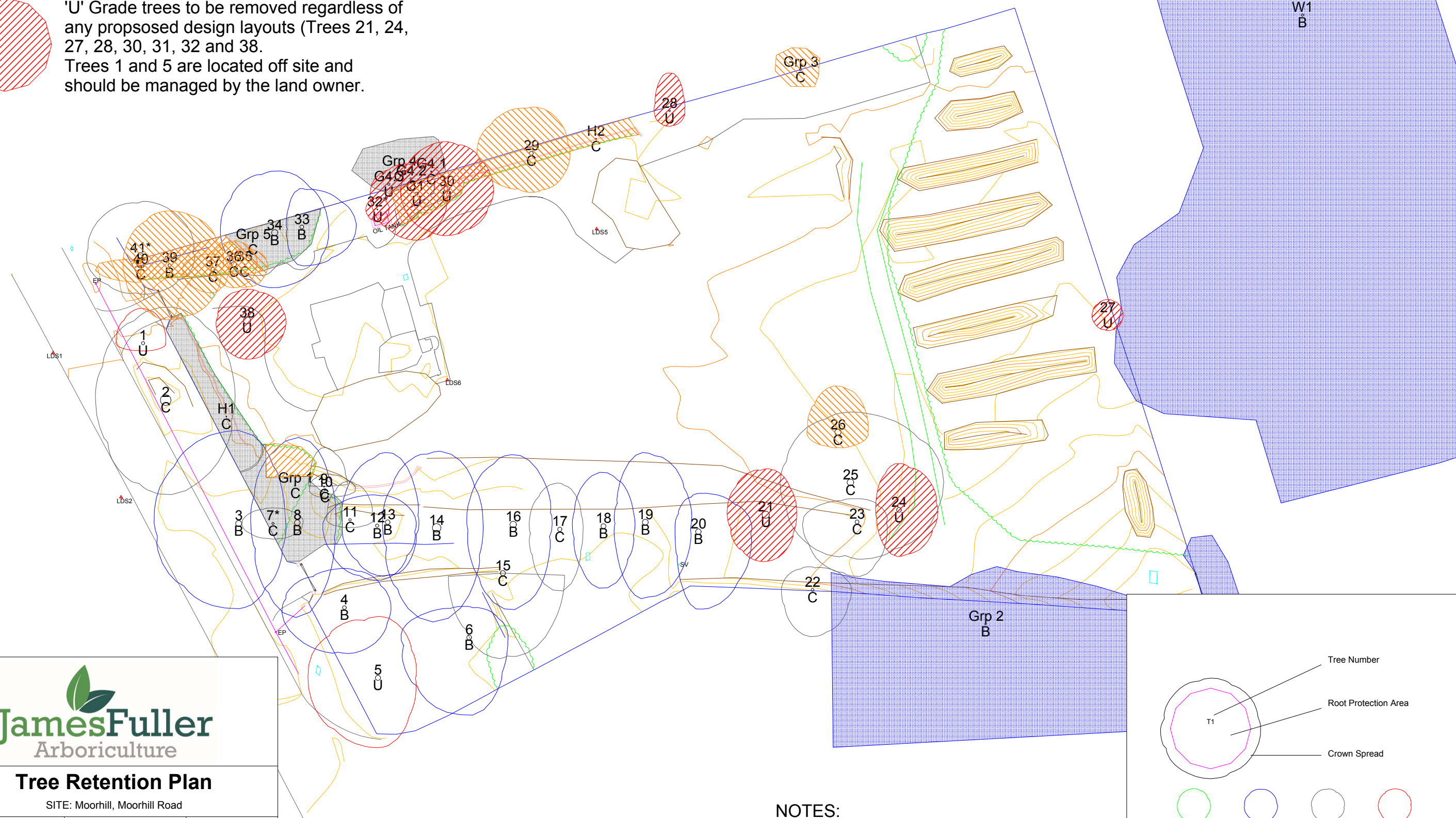


Trees 26, 29, 35, 36, 37, 39 and 40, Group 3, Sections of Groups 1 and 5 and Hedge 2



'U' Grade trees to be removed regardless of any proposed design layouts (Trees 21, 24, 27, 28, 30, 31, 32 and 38).

Trees 1 and 5 are located off site and should be managed by the land owner.



Tree Retention Plan

SITE: Moorhill, Moorhill Road

SCALE :
1 : 500 @ A3

DATE :
05/10/2022

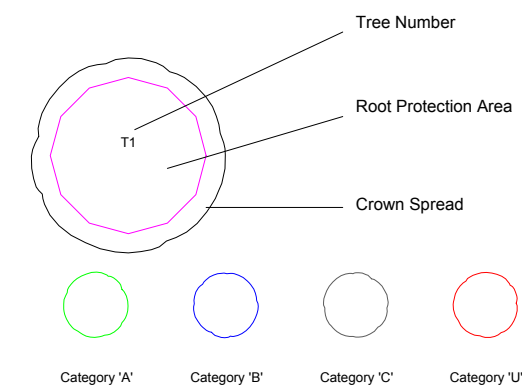
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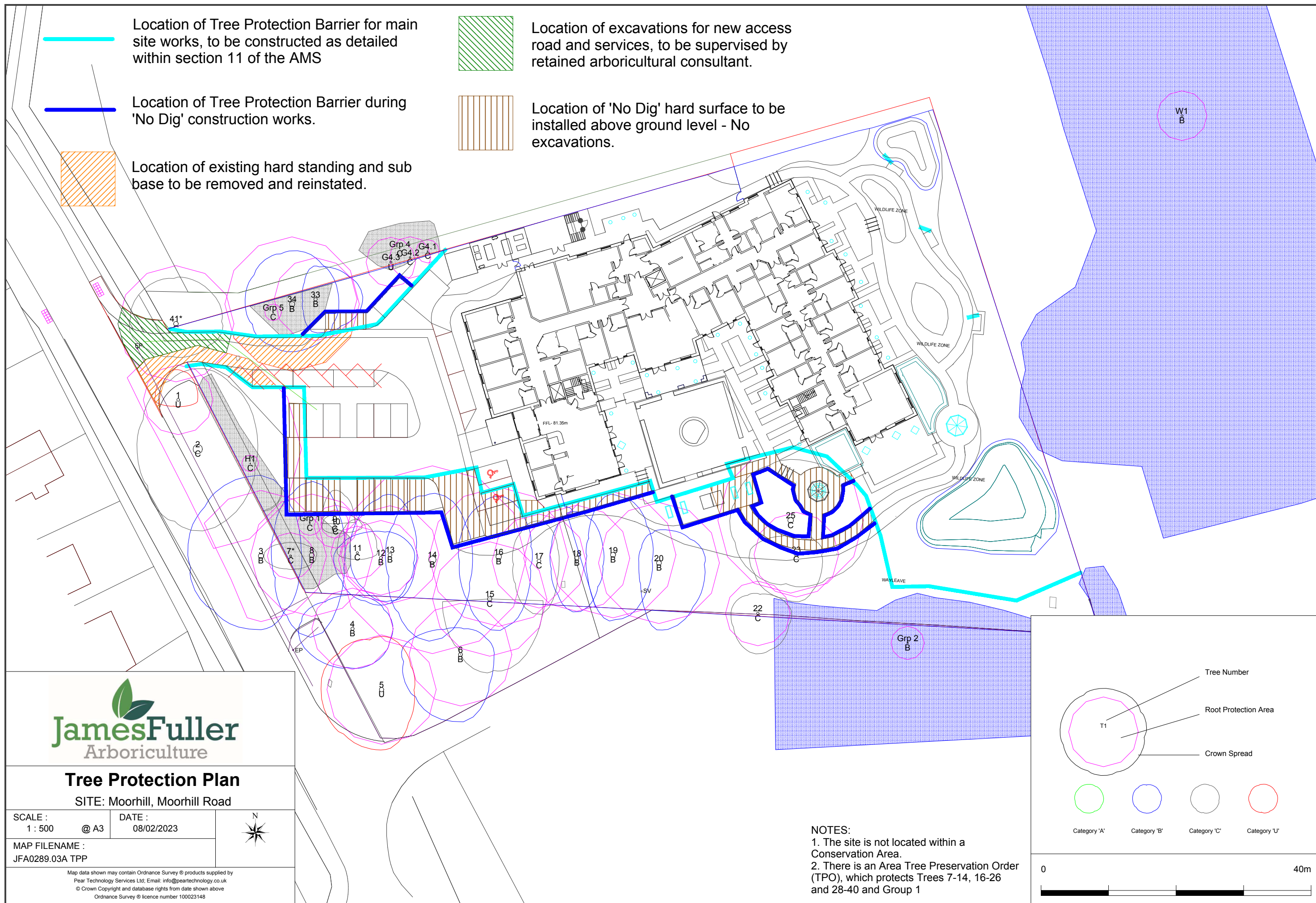


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NOTES:

1. The site is not located within a Conservation Area.
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	TREE WORKS SCHEDULE		
	Client:	Highwood Homes Limited	Site: Moorhill, West End
	Date:	February 2023	Consultant: James Fuller <i>FdSc Arb BTEC Nat.Dip Arb</i>

Tree No.	Species	Recommended Works
1	Western Red Cedar	• Inform Owner of Duty of Care • Advise Removal
2	Pine	• Inform Owner of Duty of Care
3	Oak	• N/A
4	Field Maple	• N/A
5	Narrowleaf Ash	• Inform Owner of Duty of Care • Advise Removal
6	Turkey Oak	• N/A
7	Oak	• N/A
8	Oak	• N/A
9	Silver Birch	• N/A
10	Pine	• N/A
11	Sweet Chestnut	• N/A
12	Common Beech	• N/A
13	Oak	• N/A
14	Oak	• Crown Lift to 4m on north and east side
15	Oak	• N/A
16	Oak	• N/A
17	Sycamore	• Crown Lift to 4m above ground level on north side
18	Common Beech	• N/A
19	Common Beech	• Crown Lift to 4m above ground level on north side
20	Oak	• Crown Lift to 4m above ground level on north side
21	Sweet Chestnut	• Remove
22	Oak	• N/A
23	Sycamore	• Crown Lift to 4m above footpath
24	Sycamore	• Remove
25	Lime	• Crown Lift to 4m above ground level on all sides

Tree No.	Species	Recommended Works
26	Sweet Chestnut	• Remove
27	Holly	• Remove
28	Sweet Chestnut	• Remove
29	Sweet Chestnut	• Remove
30	Sweet Chestnut	• Remove
31	Sweet Chestnut	• Remove
32	Sweet Chestnut	• Remove
33	Sweet Chestnut	• Crown Lift to 4m above ground level on south and east side
34	Sweet Chestnut	• Crown Lift to 4m above ground level on south side
35	Holly	• Remove
36	Lawson Cypress	• Remove
37	Lawson Cypress	• Remove
38	Western Red Cedar	• Remove
39	Sweet Chestnut	• Remove
40	Sweet Chestnut	• Remove
41	Sweet Chestnut	• Remove
Grp 1	Mixed Species	• Remove section highlighted on Tree Removal Plan
Grp 2	Mixed Species	• N/A
Grp 3	Goat Willow Sycamore	• Remove
Grp 4	Mixed Species	• Inform Owner of Duty of Care
Grp 5	Cherry Laurel Cypress	• Remove section highlighted on Tree Removal Plan
H1	Cherry Laurel	• Formative prune to create formal boundary hedge
H2	Cherry Laurel	• Remove
W1	Mixed Species	• N/A

- All tree works are advised to be carried out between July and September or November and February. Tree works should also avoid the season for nesting birds.
- All tree works should be carried out in accordance with current best practice guidelines and BS3998 – Tree Works. Only natural target pruning method to be used.



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

(TOWN & COUNTRY PLANNING ACT 1990)

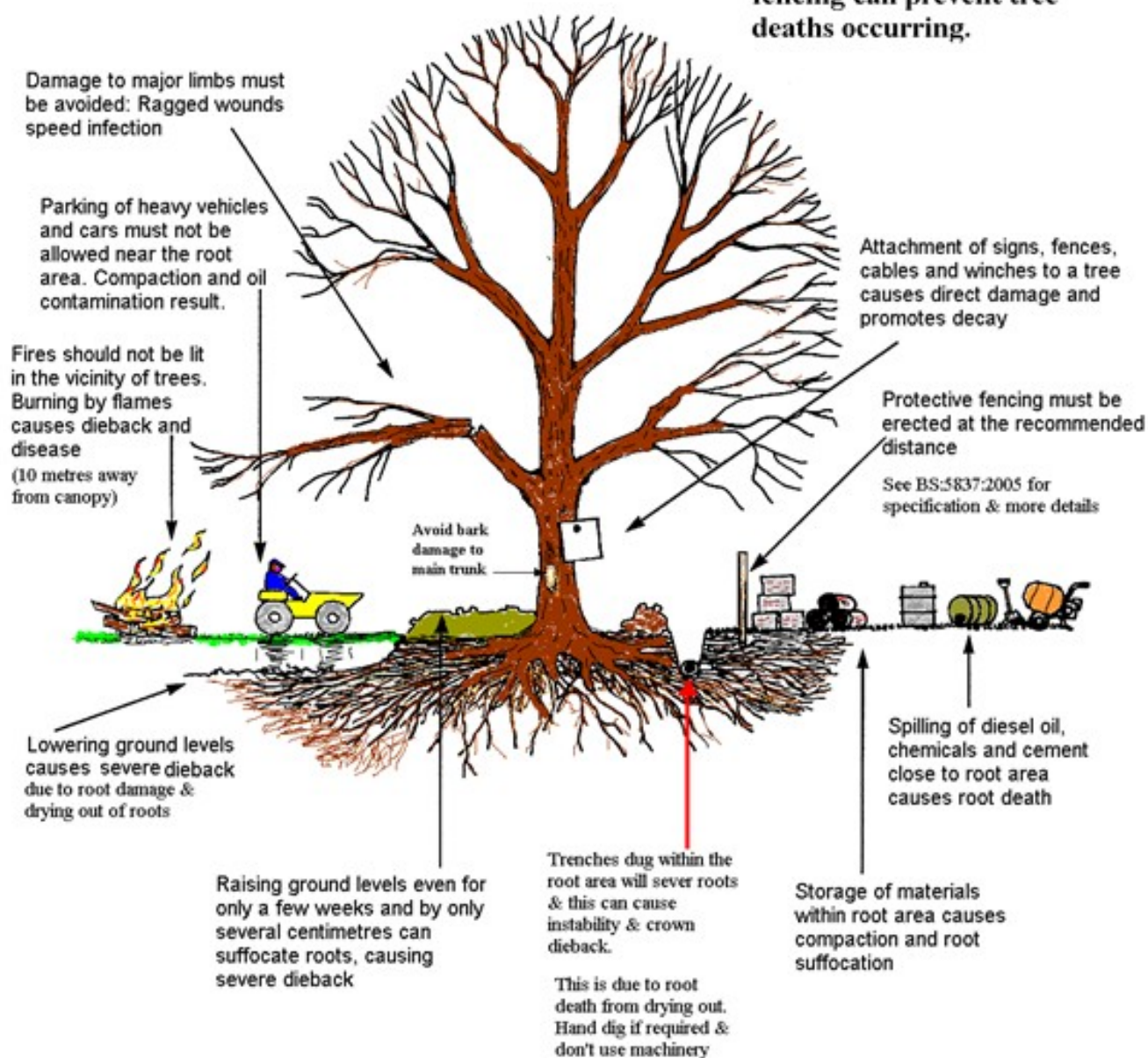
**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.**

**CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**

Common causes of Tree Death

The use of properly positioned protective fencing can prevent tree deaths occurring.



Please use copies of this as an on-site poster for personnel

(Source: Arboricultural Information Exchange website, 2005)





TREES AT _____ :

SUMMARY OF TREE PROTECTION MEASURES

Introduction

This leaflet shall be issued to all site personnel as part of their induction briefing.

It describes in summary form the precautions that site personnel shall at all times follow, to ensure that the existing trees on the site come to no harm.

The precautions described are neither arbitrary nor reducible and must be adhered to in full.

These precautions are necessary because unprotected trees are very vulnerable to damage during demolition and construction works.

Furthermore, many of the trees on the site are under **LEGAL PROTECTION** and damaging them can result in heavy fines.

Two common misconceptions about trees:

MYTH: Trees have deep taproots and so shallow excavations will not harm the tree.

FACT: 90% of all tree's roots are found in the top 600mm of soil; all excavations near to trees are likely to cause root damage which can kill the tree.

MYTH: Trees will quickly heal over any bark wound, with no ill effect.

FACT: Bark wounds take years to heal and larger ones never do; missing bark can lead to disease and even the death of the tree.

Tree Protection

All trees adjacent to unsupervised work areas have been protected by fencing.

This fencing must be respected at all times and no attempts shall be made to damage, bypass or ignore it.

In areas designated for supervised working, no works shall be undertaken without the supervisor being present or without him/her issuing a "carry on" chit.

Prohibitions Adjacent to Trees

Inside the exclusion area of the tree protection, the following prohibitions shall apply.

- **No** digging or scraping
- **No** storage of plant or materials
- **No** vehicular access
- **No** fire lighting
- **No** handling, discharge or spillage or any chemical substance
- **No** water-logging

In addition to the above, further precautions shall be taken near to trees.

- A 10m separation distance shall be observed between trees and any substance injurious to their health, including fuels, oil, bitumen, cement (including washings) builders' sand, concrete mixing and other chemicals.
- No fire shall be lit such that flames come within 5m of any foliage; this shall be taken to mean a fire separation distance to the leaved of 20m.

Avoiding Damage to Stem and Branches

Care shall be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights, can operate without coming into contact with trees.

Consequently, any transit or traverse of plant in proximity to trees shall be conducted under the supervision of a spotter to ensure that adequate clearance is at all times maintained.

In some circumstances, it may be impossible to achieve this, necessitating the pruning of the tree.

If this is necessary, a specialist team shall be called in following referral to the project Arboriculturist.

No tree pruning shall be undertaken by demolition or construction personnel.

Asking for Help

If you see any damage to a tree or its protective fencing, or if you need a tree pruning for plant clearance, contact **the retained Arboriculturist**

REMEMBER:

**ALL TREE DAMAGE IS
AVOIDABLE –**

SO AVOID IT!



Qualifications of James Fuller

James Fuller, has over 17 years experience within the field of Arboriculture and has attained a Foundation Degree in Arboriculture (FDSc Arb.) and a BTEC National Diploma in Forestry & Arboriculture (BTEC Nat.Dip. Forestry & Arb.).

James is also a Professional Member of the Arboricultural Association (MArborA) and has successfully completed the Professional Tree Inspector's, Capital Asset Value for Amenity Trees (CAVAT), Quantified Tree Risk Assessment (QTRA) and Visual Tree Assessment (VTA) Courses.

James previously worked as an Arboricultural Consultant, providing professional advice in relation to trees for one of the leading arboricultural consultancy practices in the country. As part of this role James was instrumental in providing clients with advice from the initial Tree Survey through to site completion and sign off.

James has experience of working on a variety of sites throughout the UK, from individual Visual Tree Assessments (VTA) to large development sites (BS5837: 2012) with 1'000s of trees.

James is now building an ever-growing portfolio of private clients whilst providing consultancy advice to local arboricultural companies and their clients.